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## PART I.—ESSAYS, MONOGRAPHS, AND CASES.

*Observations on Miasmatic Diseases.* By EDWARD WARREN, M.D., of Edenton, North Carolina.

THE eastern section of North Carolina is especially a miasmatic country. During the summer and fall months, remittents and intermittents prevail to an extent that would appear incredible to those whose experience has been confined to more healthy localities. Cases of the latter are usually more abundant in the earlier and latter parts of the season. They seem to herald the approach of bilious fever, then to yield the field to this disease, and finally to regain their supremacy, just as the yellow hues of autumn are fading into the sombre gray of the winter season. Remittents present themselves principally during the long and burning days of the summer months, and continue to rage with obstinacy and violence until the "miasmatic cause" has become weakened in a measure by the cool nights and chilling breezes of October. In other words, intermittents are most abundant when that influence which operates in the production of malarious disease is weakest, whilst remittents appear in greatest number during that period at which its power and virulence are manifested in their greatest intensity.

I do not mean to say that these diseases are not concomitants during the continuance of our sickly season; I only desire to state the general rule which regulates their appearance.

Intermittent fever is sometimes obstinate, but can generally be managed with ease, if sufficient time and attention are given to the task. Quinine is

of course, the great remedy for this disease, and in a large majority of cases will effect a cure with rapidity and certainty. The manner of administering this medicine depends upon the condition of the patient, and the length of the interval between the cessation of the fever and the advent of the next paroxysm. I have found that anaemic patients are not benefitted so much by quinine in quantity, as those of a fuller habit, and that children will bear with impunity a larger proportional dose than adults. If the "interval" is a long one, no necessity exists for the administration of this medicine in large doses, and the paroxysm will be more effectually prevented by a grain or two every hour, than in any other way. When there is but a short time for action, the better plan is to give a decided dose an hour or two before the expected attack, and to keep up the impression by means of small doses regularly repeated, until all danger of the chill has passed. Under these circumstances, my rule is to combine some purgation with the quinine, in order to secure its action on the bowels in the event of a failure to avert the paroxysm. Although this course is in opposition to the general practice, I am not only sustained in it by many practical proofs of its utility, but can also explain the rationale of its action on the most satisfactory therapeutical grounds. The objection usually urged against purgatives in this connection, originates in the belief that purgation induces a condition of things favorable to the invasion of the chill. Now, without denying the truth of this supposition, I feel assured that this isolated fact (?) does not furnish us sufficient reason for the rejection of cathartics under the circumstances indicated. My experience teaches me that the tendency of quinine is to the production of a state of the system which has been properly denominated cinchonism, a condition antagonistic to the disease in question, and utterly incompatible with its continuance. When the paroxysm succeeds the administration of quinine, it is a proof that cinchonism has not been induced; and when an immunity is the result, it follows that the desired phenomenon has been developed. In this view of the case, it is apparent that the administration of a cathartic could be productive of no injury, since in one instance the paroxysm must necessarily recur, and in the other it would be absolutely prevented. But there is another aspect of the matter which plainly shows the importance of the purgative plan adverted to. If a large dose of quinine fail to prevent the chill, it almost invariably increases the fever, augmenting all the nervous symptoms, and directing the circulation toward the brain in such a manner as to develop an excessive degree of excitement in that organ. In a word, it brings about that very condition of things in which the revellent and depletive action of a purgative is most peremptorily demanded. To administer it now, is to lose all the time required for its passage through the intestines, and consequently, to subject the patient to all the dangers and inconveniences necessarily in-

curred during that period. To give it previously, in connection with the quinine, is to have its derivative and sedative action either *before* the acme of the fever, or *at* the critical moment when the sufferings of the patient are the most severe, and his danger the greatest. It is hardly necessary for me to ask which is the better plan of the two. The propriety of the previous administration follows necessarily from a bare statement of the facts of the case. Convinced that the exhibition of purgative medicine in this connection cannot prove detrimental to the patient, and feeling well assured that it *may* do much good, I make it an inviolable rule to administer large doses of quinine in connection with Epsom salts. Much experience has taught me that this plan is as feasible in practice as it is excellent in theory, and I have no hesitation in recommending it to the profession. If the disease is not arrested by these means, I conclude that some abnormal condition of the liver has prevented the development of the cinchonic condition; and I then administer blue mass or calomel, working it off with Epsom salts, to which ten grains of quinine and a quarter of a grain of morphia are added.

In some instances, quinine seems to be inoperative, and other medicines have to be employed for the relief of the patient. Among the remedies thus called into requisition, I have found several particularly valuable in the management of obstinate intermittents. I have used dog-wood bark (*cornus Florida*), willow (*silex alba*), boneset (*eupatorium perfoliatum*), cotton seeds (*gassipitium herbacum*), snake root (*serpentaria*), holly leaves (*ilex opaca*), yepon (*ilex vomi tosia*), fennel leaves (*foeniculum vulgare*), various preparations of iron, as the sulphate, carbonate, ferro-cyanuret, &c., small doses of chloroform, sulphate of copper, Fowler's Solution, salicine, and various others which do not now occur to me.

Some of these agents, as for instance, *eupatorium*, holly leaves, fennel, salicine, cotton seeds, and yepon, seem to possess decided anti-periodic properties, and may be employed to advantage in preventing the recurrence of paroxysms, precisely as quinine is used. Others, as the preparations of iron, copper, Fowler's Solution, chloroform, &c., are essentially alterative in their properties, breaking up the morbid habit upon which the disease depends, and introducing a new and improved condition into the system.

With those who have long been victims to this malady, the physician has something more to do than simply to interrupt the progress of one attack. He has to guard most diligently against other invasions to which his patients are exposed both because of the enervation resulting from the disease itself, and the existence of an irritation of the stomach, spleen, or liver, which is frequently a concomitant of protracted intermittents. The indications under these circumstances are too plain to be mistaken. It is necessary to restore the system to its natural tone, to destroy the periodic

tendency to disease developed by the morbid agent, and to relieve the organ irritated and suffering. As a means to accomplish the two ends first indicated, it is necessary to administer alteratives and tonics continuously, and to combine with them either quinine or some other anti-periodic. My practice is, to use some preparation of iron in conjunction with the sulphate of quinine for a long period, giving a few grains of each daily, and increasing the dose of the latter every seventh day. Of all the ferruginous preparations, the ferro-cyanuret answers best, as will be discovered by all who fairly test its efficiency. An admirable plan is, to combine it with capsicum and gentian, and to administer two grains of the preparation thrice per diem. Fowler's Solution does well, when there is but little irritation of the stomach; and when employed persistently in connection with some vegetable tonic, frequently effects a permanent cure of most obstinate cases.

When irritation either of the stomach, liver, or spleen exists, it will exhibit itself by alterations in the appearance of the tongue, hue of the skin, color of the dejections, together with the manifestation of other rational symptoms too numerous to be detailed.

1. When the stomach is principally affected, it becomes a matter of the first importance to attend strictly to the diet of the patient, and to compel him to refrain both from those articles of food which are irritating in themselves and difficult of digestion. Acids, well diluted, may be employed with advantage; tonics and alteratives of every description can be used with benefit to the sufferer, provided no acute symptoms are present. The subnitrate of bismuth will be found an invaluable remedy in a majority of cases, effecting a cure of the diseased condition with more rapidity and certainty than any other agent in the therapeutical list. External irritation is an excellent adjuvant to the other remedies; but it is important to avoid the use of croton oil for that purpose when any laxity of the bowels presents itself in this connection.

2. When the liver is principally irritated, some torpor of the organ usually results. Blue mass given at night, and followed in the morning by a small dose of salts and quinine, together with the use of cups or a blister immediately over the left hypochondriac region, and a proper diet, will effect a cure with more certainty and rapidity than any other plan with which I am acquainted.

3. When the spleen is the suffering organ, it generally becomes much enlarged and very tender. Acute inflammations of this organ are frequently the sequelæ of long-continued intermittents; and when so, the prognosis is doubtful, and their treatment difficult. In many instances the excruciating pain which characterizes splenitis, commences at the onset of the paroxysm, advances pari passu with the exacerbation, declines when the apyrexic period

approaches, and subsides entirely during the succeeding interval. It is by this periodic tendency, in connection with the hue of the skin, condition of the tongue, season of invasion, and previous history of the case, that this affection can be distinguished from pleuritis. The physical signs characteristic of the latter affection, do not constitute an invariable criterion by which to diagnosticate it, for the reason that in some cases of splenitis, where the organ in question is much enlarged, and presses on the diaphragm, there is not only a hard and dry cough developed, but the breathing becomes short and rapid, and something very much resembling the "friction sound" is produced. It is true that there is no ægophony in this disease; but this sign only presents itself after the exudation of lymph, and not in the incipiency of pleurisy, and consequently, constitutes no element of the differential diagnosis between splenitis and an inflammation of the pleura in its primary stage. Again, Dr. Wood remarks, that "the extension of the dulness on percussion, downward into the abdomen" will indicate the fact that the spleen is the suffering organ. Now, this rule is entirely valueless when applied to miasmatic districts, for the reason that numbers suffer with an enlargement of the spleen during the whole of their lives, and if they were tried by this test, the physician would be invariably deceived in regard to the locality of their diseases. In other words, many cases of pleuritis of the most active and fatal character occur in connection with this downward extending dulness; and to regard that as an important index to the formation of a proper diagnosis is voluntarily to abandon oneself to error, and deliberately to resign a patient to death. As I have before remarked, the paroxysmal nature of the pain and accompanying fever, the history of the case, the appearance of the tongue and color of the skin, indicating the participation of the liver and stomach in the diseased condition, taken in conjunction with the continued absence of ægophony, and the non-development of other physical signs which characterize more advanced stages of pleurisy, will point out the organ suffering, and distinguish splenitis from other diseases. The treatment required for the management of this affection, can be best explained by giving a case in detail.

B. H., aged 30, whose health had been usually good, was attacked with intermittent fever early in the summer of last year. As he had faith in the powers of his constitution finally to attain the mastery, and as he lived several miles from a physician, he failed to procure medical assistance for more than a month. During the whole of that period he was suffering with the tertian form of the disease in question. He finally sent for me in haste, under the belief that he had an attack of pleurisy. I found him with an excruciating pain in the left hypochondriac region, and along the lower border of the chest; which was increased by coughing, making a

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deep inspiration, and lying upon the affected side. His respiration was hurried, and occasionally interrupted by a short, dry cough. There was some tenderness, tumefaction, and dulness, just below the rib, and extending "downward towards the abdomen." Upon auscultating, I distinctly discovered something which seemed wonderfully like the "friction sound" of pleurisy. His pulse was small, hard, and frequent; his skin dry and yellow; his tongue thickly and thoroughly coated; and his countenance anxious and expressive of very great suffering. I concluded that it was a case of splenitis, for the reason that it occurred as the finale of an intermittent attack, at the season of the year when pleurisy is uncommon, and because the rational and physical symptoms when combined seemed to point most significantly in that direction. His sufferings were so great, that I found it necessary to use chloroform, compelling him to inhale it freely, and using it topically where the pain was most intense. After composing him in a measure by this plan, I gave him the following preparation,— sulp. quin. gr. x, sulp. morph. gr.  $\frac{1}{4}$ , sulp. mag.  $\frac{3}{2}$  ss, and aqua, f  $\frac{2}{3}$  j., and cupped him freely over the abdomen. I had the satisfaction of finding him very soon in a fine perspiration, with a pulse more open and less frequent, a decided abatement of the pain, and, in fact, an amelioration of all the symptoms. I then directed warm fomentations to be applied constantly to his left side, and instructed his friends to administer ten grains of calomel at night, and to follow it next morning with a dose of salts, and ten grains of quinine. The next day he was better, having spent a quiet night, and having been freely operated on by the medicines administered. I directed him to take small doses of quinine regularly every hour, and to apply a blister just over the left hypochondrium. I was sent for again in the afternoon, and found him suffering as on the day previous. His chill had come on at an early hour, and with the rise of his fever there had been a recurrence of the intense pain already described. I treated him precisely as before, omitting the cupping, and with the same success in relieving and composing him. The next morning I commenced early with two grains of quinine every hour, and was fortunately able to prevent the approach of his chill, and to secure for him a day of rest and comfort. I saw him again on the succeeding morning, found him improved, and directed quinine to be given every second hour, and the blister to be kept open. In a week he was so far recovered as to be able to ride to my office, a distance of seven miles, without suffering materially from the exertion. On examination, I discovered that, notwithstanding there had been a considerable abatement of the tumefaction and tenderness, there was still sufficient enlargement and soreness of the spleen to indicate the continued inflammation of that organ. I directed him to use mercury in the form of pills, made of ordinary mercurial ointment, every night and morning until his gums were affected, tak-

ing pains to keep his bowels properly open, and to be prudent as regards his diet. I also instructed him to keep a blister open and running over the seat of pain, and also to take five grains of quinine every seventh day. So soon as his gums were touched by the mercury, I substituted the iodide of potassium for that remedy, and finally affected a complete cure of the disease. The individual is now entirely well, and attends regularly to his business.

I have dwelt at length upon this case, not because there was anything new in the plan of treatment adopted, but for the reason that it both illustrates what I have said in regard to the difficulty of distinguishing splenitis from pleurisy, and indicates the treatment to be pursued in the acute and chronic forms of the disease. The management of the latter variety is not always an easy task, and sometimes requires months of patient industry to accomplish a successful result. Strange as it may seem, anti-spasmodics not unfrequently exercise a beneficial influence in the chronic form of splenitis. I have known many cases successfully treated with pills of assafoetida alone, when other remedies had entirely failed to produce any impression upon them. The valerianates of iron, quinine, and zinc, will also be found excellent remedies when used in connection with external irritants, anti-periodics, and gentle purgatives. Preparations of iodine answer well, when similarly combined; and frequent applications of iodine ointment may be sometimes advantageously substituted for the blistering previously recommended. Dr. Swain, of Kentucky, has recommended a prescription, which I have tried, but not sufficiently tested as yet. It consists of nitric acid, 3 ijij, sulphate of iron, 3 ij, and water,  $\frac{5}{2}$  ijss, ten drops to be given thrice per diem, the dose being gradually increased up to fifteen drops. I am inclined to think favorably of this combination; but I am assured, that the addition of valerian would improve it vastly. When the stomach does not materially participate in the irritation, a succession of emetics administered daily, or oftener, together with a flannel band worn tightly around the abdomen, will sometimes diminish the size of the spleen with more certainty and rapidity than it can be accomplished by any other plan with which I am acquainted. I should not adopt these measures if much tenderness existed, and would discontinue them at once if any thing resembling peritonitis manifested itself.

Remittent fever is the great disease of the South; and as so much has already been written in regard to it, I feel some delicacy in venturing to say a word on the subject. I do not expect to be able to give any new views either in reference to the etiology, pathology, or treatment of this disease, but simply desire to make a plain statement of the manner in which it is managed in this section of the country. Bilious fever, as I have before remarked, first makes its appearance in June, and continues to rage with unabated intensity until late in October. The early cases are not usually

as violent as those of a later date, but they are decidedly less controllable by quinine; that is to say, the "abortive treatment" is more frequently unsuccessful with the fevers of June than with those of October. I have been led to the conclusion, from this fact, that the more purely miasmatic an attack of fever, the greater the susceptibility of the system to the antagonistic influence of quinine, and the more reliable this remedy in the production of a favorable issue. In many instances, there seems to be an inverse ratio between the violence of the chill and the intensity of the fever; thus, the greatest reaction and excitement will succeed the most insignificant and inappreciable paroxysm, and *vice versa*. It seems from this, that nature, even in her wrath, forgets not entirely her accustomed kindness, and hesitates to hurry her victim from one extreme of danger to another before the powers of the system have rallied sufficiently to withstand so fearful a transition. The treatment upon which I rely for the management of this affection, may be divided into, that which is proper for the chill; the "rise" of the fever; and the decline of the excitement.

(1.) If the chill be an ordinary one, I simply endeavor to render the patient comfortable, by covering the abdomen with a warm meal-poultice, applying hot bricks to the extremities, and administering warm yepon tea. If there is much sick stomach, I give an opium pill, and sprinkle that part of the poultice in contact with the abdomen with powdered mustard, or apply chloroform just over the epigastrum. If the paroxysm assumes a more congestive form, I then apply cups to the back of the neck and between the shoulders, use mustard plasters saturated with chloroform on the abdomen and wrists, soak the feet in warm water well supplied with mustard, and administer the warm tea as before. If these means are not attended with immediate benefit to the patient, I substitute small doses of calomel and opium for the warm tea, and, in addition, give ten or fifteen grains of quinine every second hour *per rectum*. This is, in fact, the treatment to which I resort in congestive fever; but as it frequently happens, in the course of an ordinary remittent, that the paroxysm presents all the features of the former disease, I have thought proper to refer to it in connection with the management of the latter affection. In some instances, where much plethora exists, and when the strength of the patient justifies the lancet, bleeding will be found an excellent remedy, particularly if it be associated with a hot mustard-bath for the feet. An excellent mode of applying heat continuously, is to take a blanket, double it up to the required size, soak it in warm water, and then place it over the abdomen. A still better plan is, to fill a bag made of gutta percha with hot water, and apply it in a similar manner. Heat may be applied to the spine in this way from one end to the other, which remedy answers often an admirable purpose under the circumstances referred to. Salt, when heated, cools

slowly, and on that account may be used with advantage to meet the same indication. The proper way to employ it successfully is, to heat a considerable portion, put it in a closed sack, and then use it topically as a poultice. I have frequently cut short a chill by administering at once ten grains of quinine and a quarter of a grain of the sulphate of morphia. But I do not consider this safe practice when there is evidence of congestion of the brain, and consequently I do not recommend it when that condition exists.

(2.) When the fever is rising, that is, after all evidences of the chill have disappeared, I make an effort invariably to carry out the "abortive practice." I have great faith in the lancet, in violent cases of remittent fever, and unhesitatingly employ it as an adjuvant to the practice just referred to. I can best illustrate my meaning by referring to a case.

(I.) Called to see a negro man, aged 23 years, well formed, very strong, and generally healthy. His chill had passed off two hours previous, and he was then suffering with a most violent fever. His pulse was full, hard, and frequent; his skin hot and dry; his tongue thickly and thoroughly coated; and his eyes red and roving. He complained of intense pain in the head and back, uneasiness in his extremities, and distress about the epigastric region. He was so restless, that it was with great difficulty his attendants could keep him upon his bed. On inquiry, I learned that it was the first day of his sickness, and that he had been much exposed to the sun and dew. Administered  $\frac{1}{2}$  Sulph. quin. gr. x., sul. mag.  $\frac{1}{2}$  ss., sulph. morph. gr.  $\frac{1}{4}$ , and water  $\frac{1}{2}$  j. f, and directed his head and extremities to be freely bathed with cold water for twenty minutes. At the expiration of that time, I bled him copiously from the arm. A free perspiration was induced, and the patient declared himself better. Allowed him to drink yeopon tea; and in an hour I found that the perspiration continued to pour from him, and that he was almost entirely recovered. He declared himself a new man, and said that he felt almost well. Directed yeopon to be continued, and ordered ten grains of calomel to be given at night, and a dose of salts, containing ten grains of quinine and a quarter of a grain of morphia, in the morning.

Called the following day, after the hour for his chill; found that the medicine had operated well; that the perspiration had continued with but little abatement, and that the patient was in every respect decidedly better. Ordered a grain of quinine every hour until twelve had been administered, and directed his master to send for me if he had another paroxysm. The boy left his bed after the second day, and was entirely relieved from that time.

(II.) Saw B. J., aged 50, generally healthy, two hours and a half after

his chill ; found him with just such a fever as I have described above—not so restless, but with more pain in the back, and slight nausea. Learned that he had been ill two days, with a decided remission on the previous evening. Administered Rx sulp. quin. gr. x., sulp. morph. gr.  $\frac{1}{2}$ , sulp. mag.  $\frac{5}{2}$  ss., and water  $\frac{3}{2}$  j f. Waited twenty minutes, and then bled him freely. Perspiration started from every pore ; his whole system was thoroughly relaxed, and he at once declared himself better. Gave yeopon tea, followed by calomel at night, and quinine, salts, and morphia in the morning. Called next day ; learned that the perspiration had continued, and found the patient better. The medicine had operated finely, and produced bilious discharges. Directed a grain of quinine every hour, and discharged the patient as cured. He has never had a chill from that day up to this time.

(III.) Sent for to see J. G., aged 45, very robust, athletic, and healthy. Found him in the cold stage ; applied hot bricks to his extremities, and a warm poultice to his abdomen, and gave him warm tea to drink. Called again in two hours, and found him with a high fever. His head suffered greatly, and there was much restlessness and general uneasiness. His pulse was full and frequent ; his skin slightly moist, and very yellow ; his tongue covered with a thick, grayish fur ; and, indeed, every symptom of a regular remittent attack presented itself. I gave him quinine, morphia, and salts, as in the other cases, and followed them, in half an hour, with a copious bleeding from the arm. A fine perspiration was the immediate result, and a feeling of decided improvement followed as a necessary consequence. Gave calomel at night, and the usual combination of salts, quinine, and morphia in the morning. The bowels were not properly moved, however, cinchonism did not result, and there was another paroxysm, followed by considerable fever. I gave him an increased quantity of salts, with the same proportions of quinine and morphia. The patient was speedily relieved as before, and continued to improve from that time. He had no return of his chill, and has enjoyed uninterrupted health up to this period.

I could go on enumerating many other cases of like character ; but the identity between the treatment pursued in all of them, is such as to render further detail unnecessary. I have resorted to this "combined method" of managing bilious fever a great number of times within the last three years, and have never yet known it fail in giving immediate and permanent relief to the patient. Of course it is unnecessary to pursue this plan in every instance, as a majority of cases are managed easily without it ; but in those violent forms of remittent where prompt and decided measures are

required, this constitutes *the treatment par excellence*. When the lancet is not required, I omit it, of course, and rely for a successful issue on the course already detailed. That is, I begin with the quinine, salts, and morphia, follow it by calomel at night, and repeat the first prescription in the morning. A larger majority of cases will be cut short by these means than by any other plan of treatment that can be employed, and I have no hesitation in recommending it to the profession as worthy of confidence and pursuit. I do not think there is any incompatibility, therapeutically, between the lancet and a large dose of quinine and morphia. They are both sedative in their effects, and consequently their simultaneous employment is not in the least contra-indicated. The abstraction of blood not only assists the action of quinine in this way, but it also places the system more under the influence of that particular remedy. It is a well-established fact, that the diminution of the amount of blood has the effect of calling into more active and powerful play the therapeutical properties possessed by various medicines. As the tendency of quinine in quantity is to produce sedation, under ordinary circumstances bleeding renders that result more certain and decided, by increasing the susceptibility of the system to the influence of the remedy in question. M. Bernard found that the toxical properties of certain agents were increased by the abstraction of blood, even when they were introduced into the veins, and he drew from that fact the inference that bleeding not only assisted the action of medicines by causing their more rapid absorption, but that, *per se*, it rendered the system more susceptible to their influence. The use of the lancet, then, aids the action of quinine in three ways, totally distinct in themselves, and yet perfectly harmonious when considered together.

- a. By its general sedative action, inducing in the premises the result aimed at in the exhibition of quinine in quantity.
- b. By instituting that condition of things in which the system responds more directly to the properties of the medicine.
- c. By causing the rapid absorption of the agent into the circulation and securing its more certain effect on the animal economy. When viewed in this light, the use of the lancet under the circumstances indicated, becomes not only negatively proper, but positively necessary; and he who fails to employ it in this wise, really discards a most powerful and important means of relieving the sufferings and ensuring the safety of his patients.

There is, perhaps, no symptom connected with the state of exacerbation which gives more distress to the patient, and trouble to the physician, than an obstinate sick stomach. Various measures have been recommended by different authors for its relief, and in following their advice, I have used successively mustard plasters, blisters, and cups, upon the epigastrium, and pounded ice, minute doses of calomel, preparations of opium, turpentine,

creasote, soda ; preparations of silver ; and large quantities of calomel, per bram. It is possible to relieve the patient by the exhibition of some one of these remedies ; but in many instances they fail entirely in the desired object. As the nausea is necessarily connected with the febrile excitement, I have found those means most efficient in relieving it which tended directly to the arrest of the fever. My rule is, to apply chloroform freely to the epigastric region, and to administer a combination of quinine and opium per rectum. Generally so soon as a free perspiration is established, this symptom abates with the others, and the sufferer is rendered comfortable and quiet. Chloroform produces both counter irritation and local sedation, results particularly desirable in the condition of things just described. I have sometimes succeeded in composing the stomach by cold injections given per rectum every second hour, and the continuous application alternately of heat and cold to the abdomen. When the nausea continues after the abatement of the fever, I generally give an opium pill, and use mustard on the abdomen. Should these means fail to accomplish the desired result, I then either cup or blister over the seat of irritation, and give small doses of calomel, frequently repeated. In some instances, where no evidence of inflammation presented itself, I have given relief by allowing the patient to partake of whatever article of food, or drink, that was most grateful to the palate. This course, however, has to be pursued with great caution, and should never be resorted to when the attack of fever has been of long duration.

To abate the intense headache which sometimes accompanies bilious fever, I use cups on the back of the neck, ice water applied directly, and poured from a height on the head, chloroform to the temples and forehead, and in some instances warm water or a poultice placed over the entire scalp. Of course the usual means for relieving the fever are simultaneously employed in the manner already described at length.

(3.) In the decline of the fever, I never use the lancet, but begin by giving quinine and morphia, then administer yeopon tea for several hours, and follow it by calomel or blue mass at night and quinine in the morning. I have pursued this plan in thousands of instances, and have never known it to fail in bringing out a free perspiration, and in affording decided relief to the patient. I never wait to unlock the liver by calomel, but proceed at once to the administration of quinine ; and so far from supposing that the employment of this remedy has a tendency to increase the torpor, or promote the irritation of that organ, much experience and the most attentive observation have convinced me that the operation of mercurials is assisted by it, and their legitimate effects insured by the plan of treatment indicated above. If more than four hours intervene between the administration of the morning dose and the advent of the succeeding paroxysm, I give qui-

nine and salts, in time to get the anti-periodic effect of the one, in order to prevent the chill, and the purgative action of the other in the event of a rise of fever. When the patient "misses" his chill, I then give a grain of quinine every second hour, as a means to secure the immunity thus attained by the larger doses previously exhibited.

Much more might be added on this subject, but as this article has already been protracted beyond all reasonable limits, I feel constrained to draw it to a close.

I have attempted to set forth nothing new in these pages, but have labored to give a faithful and unvarnished statement of that which I have seen and done in connection with miasmatic diseases. If this paper prove interesting or instructive to a single member of the profession, I shall console myself that I have not labored in vain.

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*Case of Chorea Sancti Viti.* By J. Hibben, M. D., Brooklyn, L. I.

A case of unusual interest, laboring under this disease, recently occurred in this city. Laura B——, aged 22, born in New York, of delicate constitution and exceedingly nervous temperament, first had slight symptoms indicative of chorea when about ten years of age.

At that time she was confined to her bed, with fever of some type, for nearly two weeks, and when convalescent, a fire occurring nearly opposite where she lived, seemed almost to excite mania, requiring her to be closely watched for fear of personal injury. In a short time, however, she rallied again, and was apparently as well as ever in her life.

The death of her father occurred in a month after her illness, and such a depression of spirits followed as to render her friends apprehensive of the result; but eventually she recovered. She continued in the enjoyment of comparative health for four years after, when unremitting attention at the death-bed of her mother, loss of rest and anxiety of mind, with an extreme irritability of her nervous system, seemed to lay the foundation of the disease which so fully developed itself. Her mother died in July of '48, and since that time Louisa B——'s health gradually declined. That this affliction weighed heavily in her mind, will appear in the report of the case. At one time she, with four others, was found prostrated by the fumes of charcoal in a room where such a fire had been burning, but this seemed to leave no deleterious impression,—although the symptoms of chorea followed but a few months after.

July 1st, '54, she complained of sore throat and pain in the chest. Topical applications of argen. nit. to the throat, seemed to relieve her in a measure, so that she went into the country. Two weeks elapsed, and symptoms appeared so alarming that her family hastened her home to the city for medical attention.

On the 25th July I was called, and found her with unmistakeable symptoms of chorea sancti viti.

The most prominent were convulsive movements of the extensor and flexor muscles of the right arm; rapid protrusion and retraction of the tongue; lateral motion of the inferior maxillary; saliva flowing from the mouth; almost total loss of speech and appetite; and deglutition next to impossible. The pulse was regular at 95; and the upper portion of the body alone seemed involved, while the lower extremities were quiescent. Occasionally there were very violent contortions of the face, neck, and thorax. Prescribed emplast. canthar. vj.—iiij. to be applied to the cervical vertebrae; B Pil. cath. Co. two, to be taken three times a day; and as a tonic—

B Ferri Sulph. ʒ ss.

Tr. Gent. Co. ʒ j.

Quinae Sulph. ʒ j.

Acid Sulph. Dil. ʒ ss.

Tr. Cinchon, ʒ j.—M.

A teaspoonful every four hours.

July 26th. This morning an exacerbation of symptoms; having required the strength of four men to hold her in bed, during the whole night, so violent were the convulsions, and so continuously occurring. Two of the pills prescribed yesterday had been taken, without any effect on the bowels. The blister and two doses of the tonic seemed to relieve her, in a measure, for several hours; and then the convulsions returned with redoubled energy. No more of the medicines had been given, because she was unable to swallow them.

Finding her so violent, her arms and hands discolored by bruises from contact with the bedstead and wall, I administered chloroform by inhalation. Soon she became perfectly quiet, and breathed freely, as in sleep. The very first words she uttered, as the effects of chloroform were passing off, were, "O! my poor mother!" and these were the only words she had spoken distinctly for two weeks.

She remained perfectly at rest after the chloroform; and as I found deglutition had returned, a large dose of ol. ricini was given, and soon after a little beef tea. After prescribing an anti-spasmodic containing chloroform, to be given should these violent symptoms return, I left—promising to call again in the evening. At 3, P. M. I was summoned in haste, to find my patient suffering as much as ever, and kept upon her bed by main force. She

remained, after I left in the morning, four hours perfectly tranquil, recognizing and conversing with her attendants, when, almost without warning, the convulsive movements returned.

The chloroform was again administered, and with the same effect as in the morning, but she was quiet only for fifteen minutes, when the same symptoms returned. Again I gave the chloroform, as soon as I saw convulsions returning. This time its effects did not continue quite ten minutes. There was a double object in view in giving chloroform, first to quiet the nervous system, then with the hopes of enabling her to swallow medicine; but the last two applications of chloroform did not seem to relieve deglutition. Prescribed  $\frac{1}{2}$  Hyd. subm. gr. x, sacch. alb. gr. v., to be placed posterior to the teeth, to dissolve, and thus trickle down into the stomach, and to excite an action on the bowels, which, up to this time, had not been moved, but remained obstinately constipated.

At 8 o'clock P. M. called in consultation with Dr. E. A. Whaley. Symptoms very much the same; spasmoid movements, but not so violent. The lower extremities now seemed to participate. Protrusion and retraction of the tongue, and the lateral movement of the inferior maxillary had entirely ceased. The abdomen tense and hard; deglutition still impeded. Prescribed  $\frac{1}{2}$  Morph. sulph. gr. iij, sacch. alb. 3 ss.—M. Six powders, to be given one every three hours, placed posterior to the teeth as before. Also an enema  $\frac{1}{2}$  Tr. assafoetida, 5 j; ol. terebinth, 5 ss., in a vehicle of starch and soap suds, sufficient to make one quart; directing as soon as this had been retained in the bowels as long as possible, a clyster of warm beef tea, as nourishment.

July 27th. In company with Dr. Whaley—found my patient had passed the most quiet night since I was called, and, under the influence of morphia, was perfectly tranquil. Her friends had given her half a teacupful of beef tea previous to the last powder, which she had swallowed by spoonfuls, but at our visit deglutition again seemed impossible. Continued same treatment. The enema had no effect upon the bowels.

July 28th. At 8 o'clock P. M., same date, visited her in consultation with Dr. Benedict. Convulsive movements had returned, though not as violent as before; and morphia, like the chloroform, seemed to have lost its effect, in a great measure.

Ordered a grain of morph. sulph. every two hours, administered as before.  $\frac{1}{2}$  Antim. tart. gr. iij, and a clyster,  $\frac{1}{2}$  Ol. tigl. gtt. iij.—mucilage acaciæ Oj.; also a suppository  $\frac{1}{2}$  Morph. sulph. gr. iij, butter of cocoa, q. s.

July 29th. Our patient still more comfortable, though during the night was almost as violent as ever; seemed to recognise her friends occasionally; eyes open, and very weak; salivation from the hyd. subm. which had not passed off from the bowels; abdomen tense; respiration quick, but free.

July 30th. Administered chloroform again to-day—finding convulsions of the whole body very much increased, requiring a strong man to hold her upon the bed. The influence of the chloroform again remedied these contortions, and the muscles of the body became perfectly flexible and relaxed. Continued morphia and beef tea; to be given whenever she could swallow a teaspoonful. No action upon the bowels for six days.

July 31st. Dr. B. and myself astonished at the perfect composure of our patient this morning. She had remained quiet during the night, and though exceedingly weak, made efforts to communicate, by pressure of the hand and other signs, with her friends, showing that she recognized them and was aware of her situation.

She remained tranquil till 11 o'clock; when she died without a struggle.

Aware of the additional interest which a postmortem might contribute to the report of this case, I endeavored to secure one; but objections were too strong, and her friends would not hear of it.

There were some singular points in this case. The catamenia had been perfectly regular, and occurred a day or two before I was called. The pulse varied between 90 and 95 to the minute, neither more nor less, even during the most violent paroxysms.

Auscultation and percussion elicited normal sounds, though both her parents (I was informed) died of phthisis pulmonalis.

There had been, until recently, scarcely any derangement of the digestive organs; and until the day after I was called she had not been confined to her bed since the fever, which we referred to, at ten years of age.

No doubt the predisposing cause of this singular disease was general weakness and irritability of the nervous system.

Which—among what are considered exciting causes; viz. intestinal irritation, uterine irritation, affections of the mind, fright, horror, anger, &c.—conduced to a fatal termination in this particular instance, is still a question for solution, and worthy of further investigation.

The almost insurmountable obstacle to the treatment of this case was difficulty of deglutition; hence her inability to take medicines, and the speedy loss of influence of those remedies which were administered.

Since the prognosis is favorable in the great majority of cases of chorea sancti viti, this particular instance seems to present queries of peculiar interest.

*Brooklyn, 219 Atlantic Street, Aug. 18, 1854.*

*Case of Hepatic Abscess.* By A. W. KNIGHT, M. D., White Sulphur Springs, Hamilton Co., Florida.

Cases of abscess of the liver are not of very frequent occurrence in this country; and it may not be amiss to make a brief record of one which terminated successfully, after an operation to evacuate its contents externally.

Oct. 25, 1851. Was called, in consultation with Dr. C., to examine the case of Mr. E. C., aged 63, of Columbia county, Florida. He had been treated for three months previously, the disease being considered hepatitis, and was now thought by the friends to be gradually sinking.

On examination, the right lobe of the liver was found to be very much enlarged and tender on pressure. Percussion over the false ribs caused acute pain; pulse from 95 to 100; bowels constipated; tongue slightly coated and red at the edges; has had copious "night sweats." No pain in the head.

I decided that the case was one which would result in abscess; but, as my opinion was not acquiesced in, I was requested to take charge of the case, and did so; having, however, arranged to try for three days a preventive course of treatment which was suggested.

28th. Patient no better; had lost strength; pulse 90, under the use of stimulants frequently repeated. The swelling over the liver and the tenderness had much increased; bowels had been evacuated—the dejections being hard and light colored; tongue as before; night sweats continue; stomach irritable; shooting pains in the right side.

Prescribed light nourishment and tonics; to keep the bowels open with saline cathartics.

Nov. 1st. Patient much weaker; pulse only 50, when not excited by stimulants. The local tenderness has increased; the swelling is very prominent; sweats continue; has had slight chills at times; bowels obstinately constipated; emaciation rapidly progressing.

Flax-seed poultices to be applied over the hepatic region, and renewed every three or four hours; patient to lie as much as possible on the affected side, to favor adhesion; brandy to be administered as a stimulant, with fifteen drops of elixir vitriol at bed time.

Nov. 5th. Patient's strength remains as before, and an evident pointing of the abscess below the ribs; tenderness gone; fluctuation distinct and extending over a large circle on the most prominent point; sensation of numbness and weight in the side. The pulse is kept at 80 by the stimulant.

Believing that the patient's strength would still remain good forty-eight hours more, and wishing to be certain of adhesion before operating, I decided to defer opening the abscess for two days more.

Prescribed as much nourishment as the stomach would bear, and stimulants, with elixir vitriol at night. To have his bowels moved by the morning of the 6th; also to continue poultices.

Nov. 6th. Found the patient in a very favorable state; bowels had moved; pulse 95 under stimulants; somewhat excited by dread of the operation. The pointing was now more distinct; and, believing adhesion to have taken place, and that farther delay was dangerous, I decided to open the abscess.

An abscess lancet was introduced at right angles to the direction of the fibres of the external oblique muscle, and withdrawn by a turn half round to bisect the internal oblique, making a semicircular opening. Immediately on the withdrawal of the instrument, a stream of very fetid, greenish pus followed, and continued running rapidly until three pints were discharged. While the abscess was discharging a band was drawn tightly around the body, to aid in maintaining a pressure on the side, and that the contents might be more completely expelled. As soon as the discharge ceased a tent was introduced into the opening, with directions to remove it at night, that the accumulated pus might flow out, after which it should be replaced.

Prescribed tonics and stimulants, with light diet, and an anodyne in the evening.

Nov. 7th. Patient doing well; discharge still continues freely. Advised a more nourishing diet, mild cathartics (Seidlitz powders), anodynes at night; continue the use of the tent.

Nov. 10th. Found patient much improved, able to sit up an hour at a time; countenance animated; appetite good; bowels acting with indications of the presence of bile in the evacuations; abscess still discharging pus of a healthy appearance. Prescribed as before.

Nov. 17th. Find convalescence rapidly progressing; able to sit up most of the time; doing well every way; some discharge from the opening, which I instructed him should not yet be allowed to close up, but be kept open still by the tent; and, with general directions as to the future care of himself, I dismissed the case.

From that time to the present (May 1854) I have seen Mr. C—— quite frequently. He enjoys as good health as ever in his life, and complains of nothing but a sense of adhesion in his right side, "a sort of stiffness," to use his own words. For more than a year there was a slight purulent discharge at times.

In the above account, I have omitted the minutiae of doses, since every intelligent physician will of course be governed in this particular by the circumstances of the case.

*Fifteen Selected Cases of Operative Midwifery.* By AUGUSTUS K. GARDNER, M. D., Instructor of Midwifery and Diseases of Females in New York Preparatory School of Medicine; Member of Am. Med. Ass., Fellow of N. Y. Acad. of Medicine; N. Y. Therapeutical Soc., &c.

Since my last report in the American Journal of Medical Science, Philadelphia (July 1852), the following cases have occurred in my practice, which may not be without interest to your readers.

*Painless labor.* May 12th, 1853.—Was called at 5½ A. M. to Mrs. P., with her second child. Labor commenced at 3, A. M. Found the membranes intact, os almost fully dilated. Ruptured the membranes, contractions ensued, and at 8½, a large boy was safely delivered, vertex presenting in 1st, of Baudolocque. During the entire labor Mrs. P. felt no pain or suffering, except a very trivial pain as the head passed through the vulva. She said that she felt none with her first child. She felt a sensation at the approach of the contraction, and expressed herself rather fretfully, "O dear! there is another pain coming!" But why do you complain? I said, you suffer none. "I know it," was the reply, "but it makes me so hot." The bearing-down efforts were as forcible as in ordinary cases.

*Delivery by Forceps.* May 30th.—Was called at 12½, A. M., to Mrs. R. with her second child; the first delivered by craniotomy. Os admitting the finger; at 6 the membranes fully dilated, and the head descended into the basin, vertex presenting in first, of Baudolocque, where it remained impacted till 1, P. M., when, with the concurrence of Dr. John H. Griscom, I applied the forceps, and a plump girl was safely delivered. The placenta was attached, and was peeled off with some difficulty. Both did well.

*Breech Presentation.* May 31st.—Was sent for by Dr. Bishop to Mrs. ——, with her first child; the head presenting; sacrum to left iliac, where it had remained for several hours. Advised use of blunt hook, which was skilfully and successfully done; and by the aid of forceps to the head, a fine boy was safely delivered.

*Craniotomy, Deformed Pelvis, Prolapse of Cord, and the Delivery effected after unusual rotation of head and body.* June 9th, 1852.—Was called at 3½, P. M. by Dr. Anderson, to see Mrs. S., 126 Wooster street, in labor for several days, but severely since 1, A. M., the preceding day, under the care of a midwife. At 9, A. M., Dr. A. was sent for, and found the cord prolapsing since 6, A. M., and without pulsation. When I saw her the os uteri was not entirely dilated, the head presented, but the presentation was

not distinguishable. I advised pulv. sec. cornut, 3 j. quaque hora, as the pains were slight.

At 10 $\frac{1}{2}$ , P. M., there being no change, I proceeded to perforate the cranium. This was effected after unusual difficulty. The head was high up, almost beyond the reach of the finger; and without depressing forcibly the perineum, the perforator would strike the promontory of the sacrum, which projected so as to diminish the antero-posterior diameter of the superior strait, to about 3 $\frac{1}{2}$  inches. There was also danger of injuring the imperfectly dilated os uteri or the parietes. The craniotomy forceps were then applied, which after bringing away many of the cranial bones, finally succeeded in delivering the base of the skull, and the remaining portion, making a half-rotation in its descent.

After the head was thus delivered, I found one shoulder upon the perineum, but some inches distant from the orifice of the vulva. I passed a blunt hook under the axilla; and by strong traction upon it and the head, the arm was delivered, rotating in its descent, so that when it appeared into view, it was under the pubis. The other shoulder was then towards the perineum, and was in the same manner delivered, also rotating under the pubis.

Vigorous efforts were requisite to deliver the abdomen, somewhat tumefied; and again for the pelvis, which likewise effected another rotation in its exit. The placenta was soon delivered, and the mother put to bed very comfortably. She had had two children previously, one at seven months, and the second at full time, dead, after a week's labor.

The child was a male of about 7 $\frac{1}{2}$  to 8 pounds. The perforation was made through the anterior fontanelle; and the position appears to have been, the forehead to the right iliac, anterior, which might have proceeded to a face presentation. The rotations were all in the same direction, from left to right.

*Turning Successful with the aid of Chloroform.* June 26th.—Was called by Dr. Simmons to Mrs. ——, 40 Elm street, under the care of Mr. Dubois, student of medicine, who saw her first at 4, P. M., when the membranes were ruptured, and the hand presenting. He immediately sent for Dr. S., and I was there at 7 $\frac{1}{2}$ , P. M. Found the hand external, and also the cord pulseless and cold. The head was in the left iliac, and the thumb of the left hand to the sacrum of the mother. The pains were exceedingly vigorous. Placing the woman upon the back, we proceeded to administer chloroform, and succeeded in introducing the left hand; and, after being obliged to withdraw it several times, on account of the great pain consequent upon the contractions, I succeeded in bringing down the foot, and subsequently turning. I then applied the forceps to the head, and a small

female child was safely delivered, of course dead. This case is worthy of note for the exceeding usefulness of chloroform in overcoming the very strong contractions of the uterus, so as to admit the hand; which was not effected till the woman was in a more complete state of anaesthesia than I usually find it necessary or prudent to place them.

*Case of Difficult Labor, showing the relaxing properties of Opium, without arresting or diminishing the force of the pains.* Sept. 24th, 1852.—Was called by Dr. Simmons to Mrs. L., 101 Sullivan street, 37 years of age, with her first child, at 8, A.M. She was then forty hours in labor. Found the os dilated to the size of a tea-cup top, and child presenting breech; sacrum to left iliac. The membranes ruptured at 4, P.M. the preceding evening. I advised the administration of opium; and, in divided doses, by 11½ o'clock, A.M., sulph. morph. grs. ij. were taken without checking the pains, although materially relaxing the parts. At 6½, P.M., with tremendous pains, the head rested upon the perineum of the mother, when, by aid of the blunt hook in the groin, and assistance to the after delivery, a fine boy was safely delivered; who after being immersed in warm water with frictions, &c., breathed in the course of a few minutes, and afterwards did well. The mother convalesced rapidly.

*Puerperal Convulsions, followed by coma and complete paralysis—Delivery effected by craniotomy.* Feb. 1st, 1853.—I was called by Dr. Cleaveland at 8, P.M., to see Mrs. Thebault, a colored woman, at 25, in her third confinement, and, as I was informed, at the full time. Once the child was still-born, and one child had died of convulsions. She had a fall some two weeks since, but had noticed no unpleasant results consequent.

About 1, A.M., after a restless night, her groans awoke her husband, who "found her in a fit." She soon recovered, spoke, &c. Pains in abdomen immediately supervened. Soon after, on getting up for some water, she fell senseless, and from that time she had remained in that condition. Dr. C. was sent for at 6, A.M. Os undilated. Gave of ricini, which operated freely; applied cold to her head; as the pulse was very small, did not bleed. When I saw her at 8, A.M., she had remained senseless during the day in a state of coma, with convulsions every fifteen or twenty minutes. On examination *per vaginum*, the os barely admitted the finger (exciting strong pains), but long, thick, and rigid. I proceeded to rupture the membranes, the head presenting. This, however, had no evident effect upon her or the uterine contractions. Advised venesection. This was attempted in each arm, with an hour's interval; but the veins being small, they bled very slowly. Perhaps 1½ pints were obtained from both, with some relief, but one fit occurring during this time. During this period the os had

dilated to the size of a dollar. Still remaining comatose, at 10, P. M., I proceeded to diminish the head, Drs. Cleaveland and Levings being present, and agreeing that this was the most advisable course. Through this undilated os the operation was not easily effected. By the aid of craniotomy forceps, a small child, not apparently more than six months, was soon delivered. Coincident with the delivery, the convulsions ceased.

Feb. 2d. The comatose state still remains; but she swallows what is put into her mouth, and moves the muscles of the face when blown upon. The limbs and head are perfectly motionless.

3d. There is no change perceptible. Pupils of the eyes are much contracted, and are insensible to the light. Has swallowed a half-pint or more of toast and panada water. Bowels have moved, and has urinated freely. Is moist with perspiration.

4th. Continues the same, has drawn up right arm. Is constantly gaping.

5th. Still unconscious and immovable. Has opened her eyes, and the right leg is found to have its position changed. Drinks arrow-root freely.

6th. Has consciousness partially restored; speaks somewhat unintelligibly, and occasionally in a rambling manner; complains of pain in legs, arms, and back; wishes to be turned over. Has little sensibility; does not feel the prick of a pin in her legs or arms, except the right arm.

8th. Moves the right arm with some freedom; the toes of right foot a very little. The whole left side continues immovable.

10th. Slight action of toes of left foot.

13th. Gradually improving.

After the lapse of a fortnight from this time this woman was able to get up—gradually she resumed her usual powers. In June following she still limped a little in walking, and had not entirely recovered the strength and use of left arm and leg.

I do not know of any case of puerperal convulsions where the paralysis subsequently remained so long as this; and on that account I have narrated it more particularly than might otherwise be advisable. A week after her delivery the urine was tested, and no trace of albumen was found.

*Rigidity of the perineum, from the cicatrix of previous ruptures, impeding delivery, and rendering instrumental interference necessary.* April 2nd. Was called at 8, A. M. at the request of Dr. Kennedy, to see Mrs. M—, with her third child. The first was delivered, after four days' labor, with forceps; in which she says the perineum was ruptured nearly into the anus. The second child was speedily delivered—the Dr. in attendance, as she reports, breaking a band that constricted the passage, with his fingers, and

which he said would require to be done at every future labor. She reports herself as remaining sore for two or three weeks.

Dr. K. had been with her since 1, A. M.—the membranes having ruptured two hours earlier. On examination I find the vertex presenting in the first position of Baudelocque. The head had nearly entered the lower strait, but was prevented by a firm band, evidently the cicatrized perineum. It was judged best to divide this constriction, which was apparently not more than a half-inch in width, and stretching between the tubera ischii. This division was made upon each side. At first it appeared as if this would suffice to allow the head to pass; but as it descended, new bands, equally firm as the first, rose before it. After waiting an hour and a half, during which the pains were very strong and frequent, without noticing any farther advance, and the haemorrhage being considerable, I applied the forceps, and subsequently the blunt hook to the arm next the perineum, and safely delivered a large girl, crying lustily. There was no perceptible laceration of the perineum. Mother and child did well.

*Rigidity of the perineum; delivery by forceps without the slightest laceration of the fourchette, in primipara.* June 7th.—Was called by Dr. Simmons to Eliza, at sixteen, with her first child. She had been in labor fifty-six hours after the rupture of the membranes; and for the last eight hours no advance was perceptible. Applied the forceps and extracted, with some effort, a large and vigorous female child, without any, even the most trivial, laceration. Mother and child did well.

*Arm Presentation. Turning.* July 24th.—Was called by Dr. Simmons to Mrs. ——, with her fifth child, at the eighth month, at 5, P. M. The membranes had ruptured at 8, A. M. Found the left arm presenting, thumb to pubis. Introduced my hand, and finding one foot, brought it down, then the other; and in about five minutes the child was delivered—the body and head being delayed in the vagina—almost lifeless. By inflating the lungs and frictions for some minutes, it revived; and both mother and child subsequently did well.

*Case of Craniotomy.* July 27th.—Was called at 11 $\frac{1}{2}$ , A. M. to Mrs. McLaughlin, with first child; in labor since evening of 24th, in the care of a midwife. On 26th, at eve, Dr. Griswold was called. Woman had felt no movement since noon. Gave ergot, without relief. Dr. H. W. Brown was called, early in morning of 27th. I found the labia much swollen and inflamed; limbs oedematous; vertex presenting, low down in the inferior strait, first position; the child evidently dead; the lochia scanty and offensive. As the forceps would probably seriously injure the mother, I advised

craniotomy. After the head was punctured, the catheter was introduced—impossible before diminishing the pressure—and about a pint of very high-colored urine was evacuated. With the crotchet and craniotomy forceps, the child, a medium-sized boy, was easily delivered. The placenta was delivered by introducing the hand. There was a slight laceration of the perineum. Patient did well.

*Rupture of the uterus; deformed pelvis; delivery by turning; post-mortem examination.* August 4th, 1853.—Was called at 11, A. M. to Mrs. Sweet (1st av. and 17th st.), by Dr. Anderson.—Her previous confinement, delivered by craniotomy, is recorded as the fourth of this paper.—She had been in labor since Monday, 1st. Membranes ruptured at 4, P. M. of that day. Pains, however, slight till Wednesday evening, when she sent for Dr. A—, at 10, P. M. Being engaged, he did not see her till Thursday morn, at 10, A. M., when he immediately came for me.

When I saw her, her appearance was exceedingly bad; a hollow, ghastly look, and changed expression of countenance, indicated serious difficulty. When I heard that the pains had been strong all night, but suddenly, almost entirely ceased, about 6, A. M., and that "she took a change" at that period, I suspected rupture of the uterus. On examination, abdomen was found very tender, but not tumefied. I immediately had her placed in position upon the back, and, examining, noted a constant flow of semi-putrescent and grumous fluid. The head was found presenting, but so far distant, and as it were anterior to the pubis, as to be felt with great difficulty. Introduced my hand without trouble, and encountered a flap, which I supposed to be the elongated anterior uterine neck. Being unable to move my hand freely, on account of the narrowness of the antero-postero diameter of the superior strait—so great as to press painfully on my wrist (which is  $2\frac{1}{4}$  inches in its long diameter)—while rotating my hand, I withdrew it. On so doing, the uterine contraction was so powerful as to eject the blood to a distance of two or three feet.

On introducing the left hand, and passing it within the before-mentioned lip, I found the placenta detached, and the occiput in the left iliac fossa. Finding one foot, I immediately brought it down; the other followed, and in a few minutes the child was delivered, semi-putrid: the shoulders and head were delivered with some difficulty. The flattened appearance of the head, showed plainly the great pressure to which it had been subjected prior to the rupture of the uterus. The placenta was immediately discharged, and firm uterine contraction followed.

After delivery the patient was exceedingly prostrated, and complained of a sinking feeling, which some brandy partially relieved, and she soon fell into a sleep. Pulse 148, and soft. She had but little change in appear-

ance after this; and those around supposed that she would convalesce, till suddenly, at 6, A. M. of the ensuing day, Friday, she expired.

*Postmortem*, by Prof. J. C. DALTON.—Abdomen somewhat tumified, and resonant on percussion. On opening, slight peritonitis, and a small quantity of lymph on the peritoneal surface of uterus, ovaries, and appendages. The uterus, &c. were removed, and on the anterior surface, immediately in relation to the pubis, a rent was discovered, filled with clots of blood, six inches in length, and almost severing the cervix from the body of the uterus.

On measuring the diameters of the superior strait, the following was obtained :

Antero-postero diameter,	2 $\frac{1}{2}$	inches.
Transverse	"	4 $\frac{1}{2}$

The uterus was removed, and is now at the rooms of the Preparatory School.

*Presentation of cord, deformed pelvis, and excessive flooding after delivery.* October 2d.—I was requested by a medical gentleman to take charge of a patient some hours in labor, with the cord presenting; and the following are the particulars. Mrs. C. (35th st.), with her sixth child, all previously still-born, extremely anxious for a living offspring.

On examination, I found the cord almost protruding from the vulva, the os entirely dilated, and the feet presenting. I immediately introduced my hand, and carried up the cord out of the way of all pressure, and brought down the feet. At the same time, I discovered a diminution of the antero-postero diameter, though not great. Pains coming on speedily, the hips and body became engaged in the pelvis, and were easily delivered, but the shoulders and head offered much resistance; but in about ten minutes the child was delivered, the heart still beating. It was immediately put into a warm bath, the lungs inflated, and a half teaspoonful of brandy swallowed, &c. It gasped several times, and had some convulsive movements, but soon expired, in consequence principally, as I conceived, of haemorrhage from the placenta; a large clot of blood covered its scalp when delivered. The uterus immediately firmly contracted, expelling an immense quantity of clots; and then, with alternate contractions and dilatations of the uterus, commenced one of the most terrific haemorrhages I have ever witnessed. This continued for two hours, at intervals arrested by fainting. Six ounces of tinct. secal. cornut. were given with brandy; ice applied to abdomen, introduced into the uterus; alum in large pieces passed into the vagina as far as the cervix uteri, and finally the tampon applied, and a swathe over the abdomen, so arranged as to prevent subsequent dilatation of the uterus from internal haemorrhage, and to depress the descending aorta in some measure. Although at several periods, from the absence of pulse, of apparent respiration,

tion, and the cold, clammy sweat, I thought life had fled, she yet rallied, and finally recovered. On the eighth day subsequently, after taking a small portion of oil, she had a secondary haemorrhage to some extent, producing temporary faintness, but which was checked by the administration of ergot.

*Post-partum haemorrhage repeated in the same female at every confinement.* Oct. 7.—Was requested by a medical gentleman to assist him in attending his wife with her fourth child. In two previous labors—the first still-born—she had nearly sunk from after-flooding. There was nothing peculiar in the labor. Pains had commenced in the morning, but as the os was undilated, Dr. B— gave an opium suppository, which quieted them till evening; when the os was nearly fully dilated, and the labor commenced. At about 11, P. M., with a few vigorous pains, a fine boy was safely delivered. Coincident with the expulsion of the child, I followed the uterus down with my hands, and immediately applied a bandage. Good contraction followed. Expulsive pains soon delivered the placenta. When the head of the child rested upon the placenta, tinct. sec. cornut.  $\frac{5}{3}$  ss. was given, most of which was supposed to have been subsequently vomited. This was repeated before the placenta was expelled.

After the delivery of the placenta, fair contraction followed, and we hoped that no haemorrhage would follow. But soon, without perceptible change in uterus, a slight oozing was noticed, which rapidly increased to a fearful extent, till—pulseless, cold, and vomiting so obstinate as to expel every thing from the stomach—the state of the lady was very precarious. Ergot, ice to abdomen in the vagina, seemed useless. The uterus, alternately expanding, filling up, and contracting, expelled gush after gush of blood. Tinct. mur. ferri, gtt. xxx. were given, and alum in large pieces passed into the vagina, when the flooding ceased; and after some days Mrs. B— slowly recovered her strength and usual health.

It is highly desirable to know if this repeated *post-partum* haemorrhage is dependent upon any uterine disease, from any peculiarity in the insertion of the placenta, or solely in an idiosyncracy resulting in the want of nervous action.

*Abortion at the fourth month, accompanied by excessive haemorrhage,—instrumental delivery of the placenta.*—Oct. 9th. Mrs. M.—, in stepping from her carriage some years since, received a slight jar. She was daily expecting her third confinement. Pains soon came on, and during the next day a large child was delivered, evidently not long dead. The cord was drawn around its neck so tightly, that suffocation was apparently pro-

duced by the slight stumble. Some two years subsequently, she aborted at about the third month.

Upon this occasion, she had for several days been threatened with miscarriage. Three or four weeks previously, she had a slight discharge of bloody mucus, which, with rest and care, passed away. Upon its reappearance, attended with a full pulse and some headache, she was bled and kept quiet. This again arrested the slight secretion temporarily; but it soon increased, though but little more than at first. It being supposed by her medical attendant and myself, that this oozing came from fissures in the os, or ulcerations, it was arranged to pencil them (if found) the next morning with nit. argenti.

She was, however, suddenly taken with most profuse flooding the next morning at six o'clock, accompanied by pains; and almost immediately a fetus of about the third month was expelled. Her medical attendant was then sent for, and arriving at 7, A. M. found her blanched and almost pulseless. He speedily tamponed the vagina, administered stimulants, ice to abdomen, &c., and counselled sending for me. Owing to some delay in my coming, an eminent obstetrician was also summoned. On my arrival I gave 5 ss. tinct. ergot. Brandy had been freely taken, but constantly vomited.

The state of the lady was extremely critical. I doubt if I ever saw so exsanguinous a female from uterine haemorrhage. Excepting a slight dribbling of blood, the flow was now (9, A. M.) arrested. Upon consultation, it was deemed advisable to do nothing further. At ten o'clock it was judged advisable to carefully remove the tampon, and examine as to the condition of things. This was done, and the uterus found firmly contracted upon the placenta, the os just admitting the finger, hard and rigid. We judged it unsafe to rely upon the efforts of nature to deliver the placenta, extremely hazardous to permit it to remain and putrefy or become absorbed. The fragility of the cord admitted no traction upon it. Upon the membranes protruding, but little extractive effort could be made. I advised the introduction of a long pair of polypus forceps through the hard and firm os, to seize the placenta and bring it away. This was accordingly attempted, The instrument was carefully introduced, so as not to injure the soft parts or seize upon the os uteri, several portions of the placenta removed, and finally, the entire mass completely withdrawn. No haemorrhage accompanied or followed this operation, one which I have since seen obscurely hinted at in some foreign works on obstetrics, but of which I have yet to see a reported case either in Europe or this country.

The condition of the patient was for several days extremely precarious. With no subsequent haemorrhage or inflammation from the anaemia consequent upon such a complete draining of the fluids of the body, her appearance was cadaveric, pulse rapid and feeble, accompanied by lightness in the

head and faint sensations, increased upon the slightest movement. From this extreme prostration, by the most careful nursing and attention which wealth or friendship could give, she finally recovered, although at this present time (Feb.), four months since, she still feels debility and great fatigue upon slight exertion, inability to walk any distance, showing the great shock given to her constitution.

Subsequent vaginal examination with the speculum, has confirmed the diagnosis of disease of the os, which was found fissured, congested, and hypertrophied, its tissue more dense and unyielding, and unaccompanied by leucorrhœa or other observable and ordinary symptoms.

*New York, 141 East Thirteenth Street,  
January, 1854.*

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*Cathartics in the Treatment of Enteritis.* By O. C. GIBBS, M. D., Perry,  
Lake County, Ohio.

The term enteritis, as applied to disease, is used so differently by different writers as to require specification when the subject of therapeutic remark. Some have restricted this term to inflammation of the mucous membrane of a *part* or *whole* of the intestinal tube, thus making diarrhoea one of its prominent symptoms and its pathology more or less identical with dysentery. In the following remarks, I shall use the word as synonymous with that more expressive, though perhaps less scientific phrase, *inflammation of the bowels*—a disease that may involve any portion of the intestinal canal or its corresponding investing or lining membranes, and is usually accompanied with constipation.

However much we may know, study, or speculate, about the minutiae of pathology, our knowledge, study, and speculation have one primary object in view, and that object is the best method of removing the various pathological conditions which we call disease. That object is by no means of easy attainment; for physicians of equal intelligence and experience frequently deduce widely different therapeutic indications from the same pathological conditions. We may take any number of standard authorities, upon either of the practical departments of medicine, and diligently compare them; and in however much they may agree, we will occasionally find their therapeutic directions to be strikingly unlike. The disease under consideration presents a striking example of this authoritative discrepancy. Some writers, foremost among whom, in this country, may be mentioned Professor Wood, of Philadelphia, recommend at the outset a thorough cathartic, followed by the daily administration of some mild but efficient laxative. Others, among whom Watson and Dunglison may be mentioned,

repudiate cathartics and laxatives altogether, until the inflammation is more or less completely subdued by the efficient administration of anti-inflammatory remedies. Believing the former to be erroneous in principle and dangerous in practice, I propose a few remarks in advocacy of the latter.

In inflammatory diseases an almost uniform set of remedies have been put in requisition; among which cathartics, though not paramount, are yet quite conspicuous. It is not surprising, then, that they should have been considered appropriate in the disease under consideration, being essentially one of inflammation; and more especially as obstinate constipation is one of its most characteristic symptoms. And even where there are doubts in the mind of the practitioner, in reference to the propriety of such medication, it requires a good degree of decision and firmness of purpose to pursue an opposite course, in the very face of the earnest importunities of friends, seemingly regardless of the very source of all their solicitude. Patients and their friends look upon the attendant constipation as the very cause of suffering, and are importunate that that symptom be removed; and, unless instrumentalities are made use of with that ostensible object in view, dissatisfaction is the result with all its unpleasant consequences. But with the scientific and conscientious practitioner, the therapeutic opinions of those unlearned in medicine are counted as nothing; the question simply being, what plan of treatment offers the patient the best chance for a speedy and perfect recovery?

In inflammation of the brain or its membranes, we studiously avoid all sources of mental excitement; and, in carrying out our therapeutic indications, we wisely prohibit all cerebral excitants, whether medicinal or regimenal. In inflammation of the lungs, much talking or exercise of any kind that would increase the frequency and force of respiration, and all stimulants that would excite the action of the heart and consequently increase the labor of the lungs, are wisely and peremptorily forbidden. In inflammation of the stomach, all medicines as well as food and drink that can act as irritants to that organ are carefully abstained from and positively prohibited. So also, with all other diseases of an inflammatory character; all excitants, whether they act by increasing functional labor or as positive irritants, are carefully avoided. The same principle that aids in determining the therapeutic indications in the diseases mentioned, should and does hold good in enteritis.

Purgatives, in the early stages of the disease under consideration, can only act as irritants. The primary action of all cathartics is one more or less of irritation, and in their secondary or legitimate effects, by increasing the peristaltic motion of the intestines and the consequent friction and tension of the parts inflamed, their irritative action is more plainly perceptible. Should they be rejected by the stomach, as they often are, the muscular effort consequent upon vomiting must bring the inflamed parts into sudden exercise,

producing no small amount of irritation without any corresponding benefit. And should they be retained without operating, it requires no great amount of acumen to perceive that the effect must be decidedly injurious. Hence, we must conclude that cathartics should not be administered in this disease, until the inflammation has been subdued by other and more appropriate means. This was the opinion of Dr. Abercrombie, when he wrote, "I confess my own impression distinctly to be, that the use of purgatives makes no part of the treatment of the early stages of enteritis ; on the contrary, that they are rather likely to be hurtful until the inflammation has been subdued."

It may be asked, Should it take a week or more to make a decided impression upon the disease, should the bowels be allowed to remain confined during the whole of this time ? I would answer most emphatically, Yes, so far as the administration of purgatives is concerned. The lower portions of the bowels may be evacuated by copious warm enemata ; but more than this any interference in this respect seems to me to be productive of more injury than benefit. My limited experience in the early administration of cathartics in this disease leads me to the conclusion that, though they be retained and operate, yet they fail to do so as *fecal* evacuants, and consequently disappoint the only justifiable indication for which they are administered. The late Professor Watson says upon this point,—"It is an instructive fact, that when purgative medicines do operate during the height of the inflammation, the stools they produce are merely watery ; and it is only after the inflammation has been reduced that *feces* are discharged."

The first case of enteritis that came under my observation, by no means increased my faith in the utility or propriety of cathartic medication. I commenced the treatment with venesection, followed by calomel and opium in repeated doses as general remedies, and for local treatment warm fomentations to the abdomen ; and an occasional warm enema was advised. This treatment hardly satisfied the friends, who considered the constipation the *cause* of suffering and not the *consequence* of disease, and hence supposed cathartics the only necessary and justifiable remedies. Being a stranger in the family and inexperienced, to protect myself and satisfy friends, I called counsel in whom they had unlimited confidence. He advised a cathartic, to be administered immediately and repeated at proper intervals until catharsis should be produced. I gave my reasons for preferring a different course ; but he strenuously insisted upon a cathartic, and I reluctantly yielded to his age and experience what I could not to his arguments. Castor-oil and turpentine was the cathartic selected. The patient grew worse from its administration ; and after the third dose copious watery evacuations were produced, and they continued at frequent intervals without abatement, until convulsions and death put an end to suffering.

The only other fatal case of idiopathic enteritis that has occurred to me, was one in which purgatives were administered. The patient had been treated for six days by a homœopathist, and was getting gradually worse, when I was called to the case. Of course no harm had been done by cathartics; but the inflammation had received no check, and the patient was suffering extremely. Calomel, opium, fomentations, and enemas, were the agents summoned to her aid; and after twelve hours of medication, she seemed comparatively comfortable and was quite hopeful of recovery. The distance which this patient resided from me, rendered it impossible for me to attend except as consulting physician. Hence, a physician of mature years, extensive experience, and enviable reputation, was called to coöperate with me in the case. He insisted upon cathartics. A third physician was called, who concurred with him in opinion. I yielded a reluctant consent, and calomel and castor-oil were administered and repeated until catharsis was produced; but the patient got gradually worse and died.

Such other cases as have come under my observation have been treated without cathartics, and have uniformly recovered. It is true, my experience in this disease has been quite limited; yet, such as it is, it aids in some measure to confirm the correctness of the therapeucia here feebly advocated, and it is only because I have thought cathartics too generally resorted to, and often perniciously, that the present paper has been written.

The following treatment seems to me best adapted to meet the indications, and aid nature in the removal of the disease. In the earlier stages blood-letting should be performed, and liberally, unless decided sinking of the pulse during the flow of blood should contra-indicate. The bleeding should be repeated once or more, if a decided impression is not speedily made upon the difficulty, providing evidences of exhaustion do not supervene. After the bleeding, calomel and opium should be administered perseveringly until the system is under the influence of the combination. Calomel seems capable of accomplishing what any medicine can in arresting the inflammatory action; while opium allays pain, relaxes spasm, and lessens the peristaltic action of the inflamed bowels. The sedative effect of the opium seems of paramount importance. Would we arrest inflammation in any organ or tissue, irritation and friction should by all means be avoided. Under the influence of opium, quiet, rest in a horizontal position,—and the coädaption of inflamed surfaces is easily secured. Calomel two grains, opium half a grain to a grain, every two hours, are appropriate doses for an adult.

In addition to the foregoing, leeches, where they can be had, should be applied freely to the abdomen subsequent to bleeding from the arm; and these should be followed by the assiduous application of emollient cataplasms or warm fomentations. The fomentations or cataplasms should be

steadily continued for three or four days ; after which, should the disease still persist, a large blister should be applied to the anterior surface of the abdomen. Warm enemata should be occasionally given throughout the disease, which evacuate the lower portions of the intestines without increasing irritation. Simultaneous with the manifestation of the mercurial impression, the disease usually begins gradually to abate ; and when improvement has considerably progressed, should the bowels not move spontaneously, a laxative dose of castor-oil should be administered, combined with a small dose of laudanum.

Some standard authorities advise giving calomel, with a view to the mercurial impression, only after the third or fourth day of the difficulty, other remedies, in the mean time, having failed to produce a favorable impression. But if calomel is capable of arresting the inflammation *after* three or four days of unmitigated progress, it is certainly capable of doing it with *more certainty* and safety when early commenced with. And there are no pernicious effects following its judicious administration at all to be compared with the risk of delay. Three or four days of uncontrolled disease may work changes that no subsequent medication can ever repair. It may be a laudable ambition to conform in some measure to the too common, blind, quack-engendered prejudice, and resort to so powerful an agent as calomel in the event only of failure of other means. But in inflammation of vital organs or highly important structures, this delay is many times dangerous, serving to protract the difficulty, rendering the success of subsequent treatment more problematical, and a fatal termination more probable. In one or two instances I have made use of lardaceous applications to the abdomen, beneath the poultices, with how much additional advantage, if any, I am unprepared to say ; but probably such applications are equal in efficacy to the warm, fresh-flayed sheepskin, applied and recommended by Baron Larrey. The effects of the judicious and persevering administration of the above treatment, in connection with a rigid adherence to the horizontal position, liquid diet, and mucilaginous drinks, would doubtless, on trial, surprise those who have been accustomed to using cathartics, not only at the commencement, but occasionally throughout the disease.

The foregoing remarks have reference to idiopathic enteritis. The treatment detailed is far from being new, having been long taught and practised by the first names in the profession ; but its importance and seeming neglect will doubtless justify this repetition.

*On Placenta Prævia.* By HENRY G. COX, M. D., Physician-Accoucheur to the State Emigrants' Hospital, and Clinical Lecturer on Obstetrics and Diseases of Children in the same Institution.

OF all the incidents that occur to the parturient woman, there are none more appalling than the unavoidable haemorrhage, caused by its separation when the placenta is implanted over the os uteri; none in which the calmness and judgment of the accoucheur receive a severer test. Happily, art is enabled here to perform what unaided nature is incompetent to accomplish.

From the history of placenta prævia, it appears to have been observed at a very early period. Hippocrates mentions the occasional descent of the after-birth before the child, and the danger to which its life is thereby exposed.

The first impressions entertained were, that the placenta had become detached from its usual position, and had fallen over the os uteri. Guillemeau, a disciple of Ambrose Parè, Mauriceau, Bracken, and Pugh, all seem to have embraced this view; but Portal distinctly stated that the placenta was implanted over the os uteri. Gifford, Smellie, and Levret were also aware of this fact; but it was not until Smellie's time, that the profession generally received this explanation of the cause of the difficulty. Dr. Rigby, in his classical production on the cause of uterine haemorrhage in the parturient female, placed the subject in a practical and correct light before the profession, and deserves the merit of having attracted additional attention to it.

It will not be necessary to detail here the symptoms attendant on this mal-position of the placenta, but simply to advert to the fact, that the haemorrhage occurs after the fifth month, more generally between the sixth and ninth months of pregnancy, from the unfolding or developing of the fibres of the cervix uteri, which necessarily produce a separation of the placenta from its attachment to the upper portion of the cervix. A gush of blood frequently occurs, without any previous warning, during the last week of pregnancy, or at the time of the accession of the first pangs of labor.

The placenta may either partially present, or it may be centrically inserted over the os uteri; in the former, delivery of the child is often effected without interference; but in the latter, the case should never be left to nature.

The source of the haemorrhage has been accounted for by obstetric writers of authority in three ways.

1st. That it proceeds from the uterine sinuses; of which Dr. Lee may be regarded as the peculiar exponent.

2d. That it arises from the detached portions of the placenta, and but slightly from the uterine veins; of which Dr. Simpson is the advocate.

3d. That it takes place alike from the uterine sinuses and the placental caverns, which is the theory of Dr. Radford.

Recently, experiments have been made by Dr. Mackenzie, aided by Mr. Sharpey, by which he thinks it has been demonstrated that the haemorrhage arises from the arteries of the uterus, and a very inconsiderable portion, if any, from the placenta. His experiments and conclusions will be quoted as we proceed.

The mode of procedure recommended formerly in all cases of perfect *placenta prævia* was, that, as soon as labor had sufficiently progressed—if the os uteri were dilatable, and the woman failing from the loss of blood—the placenta should be separated from its attachment so far as to permit the introduction of the hand to rupture the membranes; the feet to be brought down, and version effected, where the head presented, and the child delivered; or, as some recommended, to pass through the placenta, turn, and deliver; but as the danger to the child was much increased by this mode, and the difficulty of penetrating a thick, unresisting body, as the placenta is, under such circumstances, added to that of the small opening through which the child must necessarily be drawn, this latter has had but few advocates.

In cases of partial *placenta prævia*, nature being often found competent to effect the delivery without loss of life to the child or mother, plugging alone has been resorted to in many such with success; the head of the child, in its progress towards delivery, itself acting as a tampon to control the haemorrhage; but, where the woman is sinking, turning is needed even in these.

The great mortality which has ensued in these cases—exhaustion, metritis, phlebitis, peritonitis, and irritative fever, the results of the loss of blood, or violence done at the time of version, having frequently followed the operation—has been observed by all accoucheurs of the largest experience, and has been the topic of sad regret and melancholy reflection to all obstetric writers. According to a statement of Dr. Lee, the rate of mortality has been about one in three of the mothers, and 65 per cent. among the infants.

This mode of delivery is still, however, practised and inculcated by many of the most distinguished accoucheurs of the day, among whom may be mentioned, Drs. Lee, Churchill, Ashwell, and others; and any departure from the established practice has been pronounced a dangerous innovation, to be accordingly reprobated.

Although it is in consonance with the safe and correct views of conservative science,—to admit nothing as true, until proven,—yet, in these days of progress, a fair hearing should be given to any feasible change

which seems to promise a chance of a smaller mortality among the subjects of this terrible parturient complication.

And as an entirely different course is practised and recommended by such distinguished men as Drs. Simpson, Walter, and others, under certain circumstances, we should be influenced by the facts elicited from the accumulated experience of competent observers, and not controlled by any theory, however ancient may have been its origin, or great the names of its supporters.

Mr. Kinder Wood, of Manchester, in 1821, having lost in a fortnight three cases of placental presentation which occurred in his practice, and which he judged should have recovered, was soon afterwards called to a fourth, whom he found in an apparently moribund state. He dared not deliver the woman on account of her exhausted condition, and therefore, entirely separating the placenta, without rupturing the membranes, left it *in situ*. The woman rallied; there was no more haemorrhage; she was delivered by natural pains, and made a good recovery. This mode he afterwards pursued, and, in 1822, taught it in his lectures. It has since been practised by some accoucheurs in his neighbourhood.

Dr. Radford, in a lecture, delivered near the close of 1844, on galvanism as a means of arresting uterine haemorrhage, recommended the detachment of the placenta in such cases; he and Dr. Simpson, of Edinburgh, having at the same time, but independently of each other, been pursuing similar investigations, arrived at the same results; and in 1845, Dr. Simpson, who has been especially identified with this new mode of treatment, published his views, which were, briefly, as follows: That in cases of placental presentation, the placenta should be detached, when rupturing the membranes is insufficient, and turning is inapplicable, or unusually dangerous; "I believe," he says, "it will be found the proper line of practice in severe cases of unavoidable haemorrhage, complicated with an os uteri so insufficiently dilated and undilatable as not to allow, with safety, of turning; in most primiparæ; in many cases in which placental presentation is connected with premature labor and imperfect development of the cervix and os uteri; in labor supervening earlier than the seventh month, when the uterus is too contracted to admit of turning; when the pelvis or passages of the mother are organically contracted; in cases of extreme exhaustion, which forbid of immediate turning or forced delivery; when the child is dead; when it is premature or not viable."

This proposed innovation or departure from the universally established practice, of course arrested the attention of the profession; and soon after, at a meeting of the London Medical Society, the statements of Professor Simpson were discussed and criticised. Mr. Dendy and others were decidedly opposed to countenancing them at all; while Dr. Golding Bird

and Mr. Crisp considered them worthy of further investigation and adoption, unless disproved.

Some obstetricians have regarded the expulsion of the placenta prior to the birth of the child as so exceedingly rare, that the report of a case has been looked on by them as unique in obstetric annals. Dr. F. Ramsbotham says, "Under a placental presentation, if the case were left entirely to nature, the bleeding would proceed, either as a draining or in gushes, until the successive faintings terminated in a mortal syncope; or—the os uteri dilating rapidly, and the womb acting vigorously—the head of the child bearing forcibly against the placental mass, might expel it first, and itself quickly follow; for it would be impossible for the child to perforate the placenta and pass through it; and it would also be unlikely that it should escape by its side, provided the mass were implanted centrally over the uterine mouth. A number of cases are on record in which the placenta was expelled before the child, in the manner I have just mentioned. Smellie has noted three, La Motte three, Lee three; my father has given three which came under his own observation, and two others communicated to him by friends. Baudelocque, Perfect, Merriman, Barlow, and Collins, each mentions a case. Hamilton had seen two. I have met with four, and others are scattered through the various periodicals. Although there is thus a possibility of a natural termination of the labor by the placenta passing first, and the child being expelled afterwards, it would be wrong to expect it or to wait for it, for the probability is, that the woman will bleed to death before the os uteri acquires a diameter sufficient to allow the passage of the placenta and child through it." From this it would be inferred, that all the above cases recovered.

Dr. Simpson has collected 141 cases in which the placenta was expelled before the child, either spontaneously or after artificial separation, in some of which, a considerable interval elapsed before the expulsion of the child; in others, both were expelled simultaneously, and in a large majority the haemorrhage was altogether arrested. In five cases, only one of whom died, it continued so profuse as to alarm the attendants, and require special attention. Out of the 141 cases, but ten died, this being the mortality from all causes: in several, haemorrhage had little or no connexion with the result.

He also says, that uterine haemorrhage in partial detachment of the placenta, in any of the stages of labor, is not arterial in its character. "The utero-placental arteries are numerous, but so long and slender, as to be readily closed: 1st, by the tonicity of their coats; 2dly, by contraction of the uterine fibres upon the course of these vessels themselves, as they pass through and amid the uterine structure; 3dly, principally by the changes in their tissue produced by the mechanical rupture of their coats; torn

arteries being little, if at all, liable to bleed, and the placenta being separated by a true process of avulsion."

Since the publication of Dr. Simpson's paper, separation of the placenta in cases of placenta prævia has been practised successfully in Great Britain, by many accoucheurs, and the cases been reported in the medical journals of the day. I have found also two reported cases in one of the journals of this country. The reports of Dr. Waller's cases are among the most interesting. He was at first strongly prejudiced against Dr. Simpson's mode of treatment; but finding the mortality in his practice, on review, had been very great, he resolved to try it when a proper opportunity should present itself. In 33 cases seen and reported by this gentleman, but 23 mothers recovered, although some of these deaths the doctor attributed to neglect on the part of the attendants. Subsequently, he reported 29 cases of the new practice, of whom only two died. In some of these cases the placenta was separated for hours before delivery; in one, in which the membranes remained unruptured, it was so for fourteen hours before the delivery of the child; no haemorrhage occurred in any of them. Dr. Waller is not disposed to give a final opinion on the matter, as sufficient experience has not yet been accumulated; but he adds: "It has been attended with no increase of the injurious symptoms, but has been followed by their entire removal."

Dr. Lee, of London, opposed Prof. Simpson's views with much warmth, objecting to them on the ground that the mortality of the old practice had been exaggerated, that the older accoucheurs had never practised on them, and that the child must necessarily be sacrificed.

Dr. Churchill, although antagonistic to Prof. Simpson on this remarkable boldness of treatment, considers that the first averment is far from being proved; that the second would be equally an objection to any improvement, and that the mortality of the children in the ordinary mode of treatment is so great, that it is an insufficient argument on which to reject the operation. Dr. F. W. Mackenzie has recently put forth the results of some experiments made by him to ascertain the anatomical source of the haemorrhage in cases of partial detachment of the placenta, which conflict with the opinion of Dr. Simpson and others, and which induce him to think that the haemorrhage is almost wholly arterial. He states that he was led to believe that some light might be thrown on the subject by ascertaining experimentally the source of the haemorrhage in an animal, whose placenta, like that of the human female, was both decidual and foetal. A pregnant bitch was obtained at nearly the full term of gestation, the uterus exposed and opened, and the following observations were made: "1st. On separating the placenta, the blood flowed freely and continuously from the denuded uterine surface, increasing with the detachment, while none

escaped from the detached portions of the placenta. 2ndly. That the blood which escaped from the uterus was distinctly arterial, being of a bright red color. 3rdly. That on rupturing a placenta, whilst still partially adherent to the uterus, a small quantity of dark, venous blood escaped from the part torn, but to a very trivial extent. We know, however," he adds, "that in the human placenta, the utero-placental arteries open into large cells or dilated capillaries, in the maternal portion of the organ, between which a free intercommunication exists; whereas in the bitch, the venous vessels of the maternal part of the placenta do not constitute a cellular or cavernous structure, but in form and distribution, resemble ordinary veins. These circumstances were particularly pointed out by Dr. Sharpey, to whom the results of the experiment were related."

In April, 1853, Dr. Mackenzie made a *post-mortem* of a woman who had died of uterine haemorrhage, and found the placenta partially adherent. By the suggestion, and under the superintendence of Dr. Sharpey, "the uterus, which had been cut off above its orifice, was carefully inverted, and several loose coagula were removed from its interior. It had the appearance of being very exsanguine; and on the surface from which the placenta had been detached, the ramifications of the utero-placental arteries could be plainly seen, but free from any plugging or coagula; about a fifth of the placenta was still adherent. In the next place, the vessels along the cut surface of the uterus were secured by ligatures placed along the line of its division, and the hypogastric and ovarian veins were also secured by ligature. An injecting pipe was now fixed in one of the hypogastric arteries, and some defibrinated blood was steadily injected. The results of the operation were as follows: The blood escaped freely from the utero-placental arteries which had been torn across by the separation of the placenta; none escaped from the utero-placental vein, nor did any pass away from the placenta. The opposite hypogastric artery was then injected, and it was found, as with the other, that blood escaped freely from the torn utero-placental arteries, but none passed out of the utero-placental veins; whilst in this case, a small quantity escaped from the surface of the placenta, contiguous to that which was still adherent. The injection was repeated several times with the same results. The orifices of both arteries and veins were plainly visible, and carefully watched. It should be added, that the vessels were entirely free from coagula."

Dr. Mackenzie then arrives at these conclusions, as the result of his experiments: That the blood lost from partial or entire separation of the placenta, is not venous, but arterial,—having also noticed in a profuse flow of blood which occurred in a case of labor progressing under his inspection, that it was both arterial and venous in its appearance, as it passed over the vulva, the arterial predominating:—That in a physiological condition, the

tonicity of the torn arteries may be sufficient to control the haemorrhage, as asserted by Dr. Simpson; but that this tonicity, like every other vital property, is liable to be modified or affected by a variety of circumstances; that it may be enervated or exhausted by whatever may tend to enervate or exhaust the nervous and vascular systems.

Dr. Mackenzie also makes some valuable and pertinent suggestions on the treatment of patients prior to their falling in labor, in whom there may be cause to apprehend the occurrence of haemorrhage; as that it may take place in two opposite states of the vascular system; in one from morbid excitement of the heart and arteries directly or sympathetically induced by functional derangement of the liver, &c.; in the other, from extreme depression of the circulation, dependent upon either atony of the vessels, or an impoverished state of the blood. Thus, in the first class, the condition of all the functions of digestion, &c., should be enquired into, and regulated; and in the other, such remedies should be used as will remove the anaemic condition of the patient, and restore the tone and energy which may be wanting by the nervous system.

As regards the bearing that the experiments of Dr. Mackenzie may have upon the feasibility of Prof. Simpson's plan of detaching the placenta, it will be remembered that, notwithstanding the absence of clot in the vessels of the uterus examined by Dr. Mackenzie, in one examined by Profs. Simpson and Reid, some of the mouths of the uterine vessels were blocked by coagula, while others were empty.

When reaction has been produced in a case of haemorrhage or nervous exhaustion, by the administration of stimuli, and firm pressure over the uterine tumor, the tonicity of the arteries is restored, and contraction will take place; while the same pressure will also so compress the bleeding vessels, that haemorrhage will be prevented, and coagula then be formed. The large clots which frequently are expelled after delivery has been completed, in ordinary cases, are the result of haemorrhage, no doubt from a want of tonicity of the vessels, which might have been secured by well regulated pressure; for in no instance have I seen post-partum haemorrhage occur, where systematic and uniform pressure was maintained over the uterine region as the contents of the uterus were expelled, and until the bandage had been well applied, except in one case, which took place some time after the placenta had come away, in an exceedingly anaemic and feeble woman, whose nervous system suddenly received a severe shock from some family occurrence. Fearful haemorrhage was the result, but this was controlled by the free use of stimuli, with pressure and friction. And in all cases of *post-partum* haemorrhage, I have little doubt, it is superinduced by a condition of the patient similar to that mentioned by Dr. Mackenzie, in which the nervous or vascular system has been previously involved, atony

being the result, or else by the non-observance of pressure on the sudden expulsion of the contents of the uterus.

The mode in which the haemorrhage, in cases of entire separation of the placenta, is controlled, seems to be the same as in some of partial placental presentation. In these cases, as the head descends, it acts as a tampon on the detached uterine vessels of the placenta, and controls the haemorrhage, as has been observed by all who have written on the subject, and will be illustrated also by two of the cases appended to this paper. In the cases of entire implantation over the cervix, when the placenta is detached, it acts with the clots formed about it, as a plug also, and controls the haemorrhage until the bleeding vessels are filled with coagula; and this explanation does not conflict with the results of the experiments above alluded to.

Dr. Mackenzie thinks from his experiments, that no necessary relation exists between the degree of haemorrhage, and that of placental separation; but Dr. Simpson states that he has uniformly observed, that the greater the separation the smaller the amount of the haemorrhage; and no case has been reported in which the placenta had been detached and left in situ, that haemorrhage has continued.

The chief argument which should have the greatest weight in favor of Dr. Simpson's plan of treatment, as cases reported have thus far shown, and which has not been satisfactorily opposed, is the lessened ratio of mortality among the mothers. On the old mode of procedure, 134 out of 399 died; of Prof. Simpson's collected cases, from both expulsion and artificial separation, 10 out of 141 cases died, or one in fourteen.

Notwithstanding all that has been said on the subject, the practice has been so recently introduced to the notice of the profession, the discussion has been so warmly conducted in many quarters, and the opposition has emanated from such high authority, that a sufficient number of cases has hardly yet been presented to enable us to indicate any more definite rules than those which follow, and are similar to those inculcated by Dr. Edwards in his paper; viz. that it would be proper to detach the placenta, leaving it in position, in all cases of *placenta prævia* in which the patient is exhausted from the loss of blood, and further haemorrhage would endanger her life, if the child is ascertained to be dead,—if malformation of the pelvis should require instrumental aid to accomplish delivery,—in which haemorrhage is not arrested by the rupture of the membranes, and version is inapplicable on account of the condition of the uterus and vagina.

The following cases, which have come under my own notice, were treated on the old method, with the exception of No. 3; as there were no reasons for resorting to any other:

*Case 1.* In October, 1849, I was sent for to see Mrs. M—, who, I was informed, had been in labor for some hours, and was flooding profusely. She had had occasional haemorrhage for a week previously. I learned that

her physician had left the city, and a stranger been called in, who was anxious to be relieved of the case. I found a young woman about 25 years of age in labor with her second child, and with pulse scarcely perceptible at the wrist, and lying with her clothes and bed saturated with blood. I at once ordered some brandy to be given her, and made an examination; the os uteri was dilated to the extent of two inches, and on one side the placenta was presenting, and a portion protruding through the os; the head of the child was descending beside the placenta: after the exhibition of the brandy a pain occurred, followed by haemorrhage, and the head advanced. I compressed the placenta with my fingers, and sent for some ergot of rye; the pains increased, the pulse became fuller, and the head descended so as to compress the placenta fully, and the haemorrhage ceased. After a few more pains the child was expelled with the placenta. The uterus was compressed by the nurse and there was no further haemorrhage. The child being anaemic and asphyxiated, artificial respiration was resorted to, and in twenty minutes it cried and respired regularly. No ergot was administered: a supporting treatment was pursued, and in fourteen days the patient had recovered. The child also did well.

*Case 2.* In July, 1851, I was requested by Dr. James Hyslop, of this city, to see Mrs. H. with him, who was in labor at term with her fourth child: soon after the first symptoms of labor occurred she had a large gush of blood. This continued with every pain. The Dr. found the os was dilating so that he could introduce a finger, and the placenta presenting. The haemorrhage continuing, I was sent for; by this time (about three hours after labor had begun) the head could be felt beside the placenta, and about one-third of the latter covered the os, with a small portion protruding. As the head advanced it compressed the placenta; the patient's strength having remained good, the pains becoming sharper, and the haemorrhage less as the compression increased; ice, only, was resorted to. Dr. Hyslop afterwards informed me that the labor was completed without any other untoward occurrence, and both mother and child did well.

*Case 3.* In February, 1853, I was called to see, for Dr. Chalmers of this city, a lady in the ninth month of pregnancy, who had suffered during the previous two months from repeated attacks of uterine haemorrhage, continuing at intervals until labor commenced, which had produced considerable depression of strength: the treatment had been, rest in the horizontal posture with the use of ice, which controlled it. Dr. F. U. Johnston also saw this case in consultation.

Two days after my first visit, labor commenced, and the placenta was found entirely implanted over the os uteri, which was too rigid to permit the attempt to introduce the hand for the purpose of version, and plugging

was resorted to, the ice also continued. In the afternoon, as the patient was becoming feeble from the loss of blood, and the os having become dilatable, it was decided to turn and deliver. Dr. Chalmers first separated the placenta, but the patient not rallying, and fearing internal haemorrhage, he afterwards proceeded to deliver the child, which was perfectly exsanguined and dead. There was no more haemorrhage after the delivery was completed. Brandy was administered freely, as the patient was much exhausted.

She was put upon a stimulating and supporting plan of treatment, but sank on the ninth day after the delivery, from irritative fever.

Dr. Chalmers has informed me that he has recently had another case of perfect *placenta previa*, in which version was performed, and the patient delivered of a living child.

*Case 4.* M. G., aged twenty-four, was admitted into the lying-in department of the State Emigrant Hospital, July 10, 1853, at term, with uterine haemorrhage. The patient has one child and always had good health. A month ago she had slight haemorrhage, with no recurrence of it until the ninth instant, when she was awakened at night by a free discharge, and blood amounting as she supposed to three pints; this morning it again occurred, and continued at intervals until four p. m., when she was received into hospital. She was immediately put to bed and the haemorrhage ceased.

An examination was made by the house physician, Dr. Clements. There were some coagula in the vagina, and the os uteri was high up and dilated only sufficiently to admit of the introduction of one finger. The usual directions were given.

There was no hemorrhage for an hour, when, in an attempt to pass water, several clots were expelled, followed by profuse bleeding; dilatation as before. At nine o'clock regular labor pains commenced—pulse 100.

There was no further hemorrhage until one a. m. of the eleventh, and consequently no vaginal examination was made, as the pulse gave no indication of failing, but she was carefully watched. At this time the bleeding recurred, and the os uteri was found to be dilated to the extent of one and a half inches, the woman's strength being somewhat diminished and pulse increasing in frequency and feebleness. I decided to introduce my hand in and deliver the child. I found the os uteri completely covered by the placenta, which was firmly attached. I separated it carefully on one side, when the haemorrhage becoming profuse, I passed my hand through the opening by the free edge of the placenta, ruptured the membranes, the arm acting as a plug, and ascertained that the face was presenting. I soon secured the feet of the child, brought them down, and delivered both child and placenta. The uterus was firmly compressed by my assistant as its

contents were extracted, and friction employed. Brandy was administered freely, as the patient had become feeble. The child was exsanguined and dead. No haemorrhage took place after the delivery. She soon rallied, the uterus contracted, and she slept for half an hour—pulse improving. An hour after, she became excited and very nervous, complained of pains, and talked incoherently. An anodyne was given. At four and a half a.m., patient fell asleep.

During the 11th and 12th, she complained of pain in the right hypogastrium, the pulse ranging at 120. Dover's powder and camphor were administered according to the indications.

On the 13th and 14th, the lochia was diminished in quantity; the pain in abdomen continued; a hop poultice was applied, and Dover's powder given. There having been no motion from the bowels, some castor oil was administered, which was followed by a free dejection. Pulse 120, and feeble; secretion of urine scanty. Opium was exhibited in grain doses every hour, and, after the sixth grain, patient slept.

On the 16th and 17th, the abdomen became tympanitic, with much tenderness; pulse 130, and she had several thin, dark yellow evacuations. The opium was continued, with poultices to the abdomen. She slept somewhat, but uneasily. Beef tea and milk punch were given as her condition demanded them.

From the 18th to the 20th she improved, and lochia returned; there was no secretion of milk.

After the 21st, pulse diminished in frequency, and the sulphate of quinine with the sesqui-chloride of iron were administered, with a well-selected diet.

On the 2d of August the patient was discharged well, being the 22d day after her delivery.

My assistants, Dr. J. Vedder and B. A. Clements, watched the case throughout with much care, and recorded with fidelity any changes that took place.

*Remarks.* I may observe in this case, that I avoided the danger likely to ensue from delay. I felt the importance of delivery at the earliest possible moment for the safety of both mother and child; for Dr. Lee has justly observed, "the fatal termination to the mother in placenta prævia is often owing to the time lost before delivery is attempted," and I am persuaded the maxim is correct "to determine to deliver early is to determine that the patient shall not die."

It will be noticed no haemorrhage took place after the placenta had been removed.

This is the only case of complete placenta prævia which has occurred

in 1,131 deliveries which have taken place in this hospital under my supervision since March, 1853.

*Case 5.* In November, 1853, I was requested by Dr. James Hyslop to see, with his brother, a case of partial *placenta prævia*, in a woman in labor at the seventh month with her second child. The head presented, but was still in the superior strait; the membranes were ruptured, and about one-third of the placenta was over the *os uteri* at the left side, and nearly detached. The flooding had previously been very alarming, but was now inconsiderable; the pains were subsiding, and the patient feeble. Some brandy was given her, and after she had somewhat rallied, it was decided that the delivery should be completed. Dr. Hyslop performed version; the child was dead. The woman recovered.

*Case 6.* Caroline S., aged 26, a native of Germany, was admitted into the Emigrants' Hospital, Nov. 30, 1853, in labor with her first child in the seventh month, suffering from haemorrhage; the head presented in the first position, with a small portion of the placenta.

This patient had haemorrhage twelve days, and again seven days before admission, which recurred 36 hours before she fell in labor. The placenta was found partially attached over the *os uteri*; ice only was applied, and the labor terminated successfully without interference.

*Case 7.* On the 20th July last, I was consulted by Mr. N. in reference to the condition of his wife, who, he informed me, was pregnant with her eleventh child in the eighth month, and had had uterine haemorrhage several times.

I found her an active woman about 40. Her health had been generally good; her bowels at present constipated. On examination, the *os uteri* was undilated. I directed rest, and cold water enemata. A week afterwards I again saw her. She had had one or two gushes of blood, but not to an alarming extent, since my last visit, and her general condition was comfortable. My former directions were repeated, with the injunction that I should be sent for whenever the haemorrhage recurred.

On the 14th August I was summoned to see the patient; but being at the time in attendance on an obstetric case, I did not reach her for three hours afterwards, when I found her in a sitting position in a pool of blood, and a chamber half-filled with blood beside her. Her pulse could scarcely be counted; she was pale, her lips were livid. I at once placed her in a horizontal position, and gave her brandy. The *os uteri* was dilated to the extent of two inches, one-third of the placenta attached to the *os uteri*, the membranes were ruptured, and the breech presented beside the placenta. As she was rallying, I immediately brought down the feet; the haemor-

rhage continuing, the child and placenta were removed together, when the haemorrhage ceased. The child was anaemic; it gasped once, but could not be resuscitated. My former assistant, Dr. Vedder (who happened to be with me), compressed the uterus while I effected the delivery. The mother immediately rallied, and on the tenth day was out of bed, and has continued to do well.

524 Houston Street.

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## PART II.—REVIEWS AND BIBLIOGRAPHY.

(*Crowded out by press of matter.*)

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## PART III.—CHRONICLE OF MEDICAL PROGRESS.

[The abstracts and translations found under this title are made expressly for the  
AMERICAN MEDICAL MONTHLY.]

*On the spontaneous development of typhus contagion.* By G. ZIMMERMANN, of Hamm.

THE question whether the development of a contagion is necessarily connected with the origin of genuine typhus, or is only the result of certain influences in its course, has by no means a merely theoretical interest; for if there are cases of typhus which develop contagion by all momenta changing the process, it is a practical desideratum to know how these are imparted, and what course they take. For then we can, at times, take measures, if not to hinder the formation of contagion yet to paralyze the activity of the infectious principle. For the present, it will suffice to consider all the cases treated expectantly which had in consequence a greater expansion of the process; their probable conformity, in course and phenomena will, perhaps, permit us to recognize what product of the disease we have to consider as the carrier of the contagion. This knowledge, however, finds a great obstacle in the circumstance that the persons who are generally the first to become infected, dwell a considerable time with the sick, and are frequently exposed to those deleterious influences which, of themselves, may produce typhus. This difficulty becomes removed, if first we have a large number of cases which point to the formation of contagion, but in which other modes of infection are evident.

It has always been supposed in typhus epidemics, that a concurrence of deleterious forces during the disease, effected the development of contagion; to the author it is far more probable that it is either personalities which, in consequence of their peculiar physiological constitution, are, in themselves, already predisposed to it, or that the causes of typhus, in particular cases, are of such a character that they conduct the whole process to the development of contagion. At times, both may operate simultaneously, and sometimes may be added thereto faulty management and bad treatment *during* the disease. The author now connects some farther observations with the following case:

A very strong recruit, M., was seized upon the 19th of December, 1852, with chills, headache, pains in the abdomen, diarrhoea, etc., and upon the 25th was taken to the lazaret. The author first examined him on the 27th, being the 9th day of the disease, at which time, with a lively fever (pulse 96, and 40°, 15 C. in the rectum), he exhibited the perfect form of an ileo-typhus. Besides the usual nervous symptoms, emaciation and loss of strength, the affection was developed in a high degree: pain; twelve stools in 24 hours, containing albumen and of the peculiar quality; the spleen enlarged; the kidneys affected, the urine being albuminous and loaded with fibrinous cylinders; the heart paralyzed, the right half distended; weak, diffuse impulse between the 5th and 6th ribs,  $1\frac{1}{2}$ " to the right of the mamillary line; the sound dull and long. Feline purr in the jugular vein; the pneumono-bronchitic affection already in great extent, with 24 respirations. Internally only gum water, but at the same time, in order to cut short the affection of the lungs [? !], a venesection and three affusions with some buckets of cold water. The increase of the disease continued some 14 days, then the process was maintained as long at about the same height, although the "fever" had lost somewhat in intensity; the 28th day was "*critical*," that is, the change for the better was decided; and now began the stage of decline, ending with the 56th day. The *critical* turn in the process on the 28th day was ushered in by a *sweat*, which was afterwards repeated several days in succession, the change being also accompanied by spontaneous urinary sediments, cleaning of the tongue, cessation of the diarrhoea, and abatement of all the other phenomena. The spleen already swollen upon the 9th day, continued so to the end of the fourth week, but was of normal volume on the 32d day. The tongue became dry upon the 10th day, soon exhibited deep transverse clefts, with a lardaceous base, and first became moist and clean upon the 28th day. The lungs were already affected upon the 8th day; the venesection made on the 9th was not sufficient to arrest the affection. It was extensively diffused, and became first extinguished with the 38th day, but so perfectly that the lungs issued from the process unhurt. Sweating occurred once upon the 12th day; in the

course of the 23d day a profuse perspiration came on again, which had, for its result, an eruption of *miliaria alba* and a moderation of the temperature. The miliary vesicles continued till the 26th day, when, for the first time, some spots of roseola were to be observed upon the breast. The sweat on the 27th day was accompanied by no new miliary eruption, but a diminution of the temperature two degrees, and a remarkable moderation of the respiration. From the 27th day began a *furfuraceous desquamation* of the cuticle over the whole body. Already, upon the 18th day, the decubitus was perfect; on the 45th and 46th days two abscesses at the anus were opened. The cold affusions employed on account of the delirium, unconsciousness, and apathy, had only a transient effect.

The attendant of this patient, not a very strong man, sickened between the seventh and eighth week, and according to the assurance of the attending physician, passed through a similar typhus. He had very copious diarrhoea, also roseola and desquamation of the skin; the course was likewise a protracted one, so that the man was incapable of labor until after 13 weeks. He could have become infected only from his ward, because no typhus prevailed in the city, and the case described may well have generated contagion.

It is peculiar in this case, that this man coming from a locality where there was no typhus, and already three months invested, was the only one of the whole garrison who was attacked in the winter of 1852-3 by abdominal typhus, whilst formerly seven or eight were accustomed to sicken; and perhaps it was owing to the circumstance that this man was uncommonly disposed to the typhus process, so that even very slight causes sufficed to call it into action. That the deleterious influences to which newly arriving soldiers have to expose themselves, were weaker than usual this year, the author concludes from the fact that none of the rest sickened; and we cannot well suppose that out of fifty recruits only one brought with him a disposition to typhus. When strong causes determine the typhus process in an organism capable of resistance, so its products will be other than when the individual disposition thereto is very great, but the causes very weak. If this depends, in the latter instance, upon peculiar chemical and physical relations, in a word, upon the composition (humorism), upon the manner in which the chemical processes take place in all or some of the tissues, for example, the blood and the nerves, so it is clear that products may arise in the event of the process kindled by the typhus cause, which are capable of transferring to other organisms the chemical quality residing in them, their peculiar excitation and motion of atoms (ferment). It may be that every typhus patient generates more or less contagion; but it does not acquire efficiency, because it is destroyed by constituents of the air, e. g. the ozone, or there is frequently an absence of properly disposed individuals, or a longer

influence is required in order to germinate. Its strength is directed, perhaps, wholly according to the peculiarity of the case.

Perhaps those cases of abdominal typhus, which require eight weeks to run their course, always develop a contagion, which calls forth the same process when its influence is directed upon predisposed persons for a certain time and in mass.

For four weeks the patient was in a violent, continued fever; his corporeal heat continued on the average  $3^{\circ}$  R. above normal; in the fifth week it was  $1^{\circ}.5$  higher, and then gradually approached again the preceding standard. The author thinks that a process which goes on five weeks with an exchange of substance so great as is necessary to the production of so high a corporeal heat, may at last form products so qualitatively abnormal that they may attain infecting power. Small-pox, scarlatina, and the measles, also develop their contagion in the state of "fever," that is, very exalted temperature and lively circulation, and a corresponding hyperæmia of the skin. We see that which is similar in abdominal typhus; if blood of three or four degrees higher temperature, qualitatively and quantitatively abnormal, circulates for 4 or 5 weeks in the capillaries of the skin, the formation of abnormal products in time occurs; this is evidenced by the sweats, the miliaria, roseola, desquamation of the whole cuticle, falling out of the hair, formation of abscesses about the anus, and the early appearing decubitus. If an infectious principle is formed, we have then the choice of considering the stools, the pulmonary exhalations, or the products of the skin as its carriers.

The author is not inclined to consider the stools as the carriers, notwithstanding their great number and quantity up to the fourteenth day, and notwithstanding the length of time the exudation from the intestine lasted, since they were carefully removed from the sick chamber; and as the patient never passed his urine with the stools, but in a separate vessel, they were not subject to so rapid a decomposition. Were the stools the carriers or producers of the contagion, according to the author's opinion the attendant of the patient must have felt unwell sooner than in the seventh or eighth week; for we could only consider those stools as contagion-carriers which contained exudation, and this disappeared toward the end of the fourth week. Had the attendant been infected in the second or third week, this would give, as the period of incubation, from three to five weeks, a space of time which is never observed in well-determined typhus contagion.

As to the idea that the pulmonary exhalations convey the infectious principle, there are no facts in support of it; therefore we can only consider the skin as the producer, which also evidently is so in the other contagious exanthematic processes.

What the contagion is, and to what part it clings, is a question which

remains in the domain of hypothesis. If it is volatile, miasmatic, it is, perhaps, excreted with the sweat, and found, in part, in the miliary vesicles. If, on the other hand, the contagion is of a fixed nature, it may cling to the epithelia of the epidemics, which desquamate furfuraceously, and are scattered by millions in the air. The cause of the desquamation of the cuticle in the later weeks of typhus is, perhaps, as in the other exanthematic processes, an exudation; and either this furnishes the contagion which clings to the epithelia or penetrates them, or these latter have attained, through an alteration of the blood, so peculiar a property, that they can transfer their inner chemical movement to other organisms, and call forth the same process through which they received their contagious power. The young epithelial cells found in the deepest layers of the skin, probably originate from the blood, and they receive from it their nutritive material; perhaps radically altered in their chemical constitution they so develop this that they become the contagion, in the same manner as it is formed in small-pox, vaccinia, syphilis, etc., when the blood itself is then free. By means of the air the epithelia desquamating in so large quantity must come in contact with the respiratory mucous membrane, and from hence may readily act upon the blood as a zymotic body.

If it is determined that those cases of abdominal typhus which, without the accession of accidental disturbances take a protracted course and exhibit the above-mentioned phenomena upon the skin, always form contagion, it follows therefrom that we should consider how to neutralize its effect. With the beginning of the fifth week, when we perceive that we have to do with a contagion-forming process, we must, if the infectious principle is miasmatic, destroy the same by chlorine fumigations; if the epithelia of the skin contain it, by chlorine lavements and baths. If an infection is only possible from a more protracted action of the contagion, a frequent change of the attendants, etc., should be recommended. [Oppalzer warns especially those suffering from urethral blenorrhœa from remaining by the bedside of typhus patients; and the reporter has had an opportunity of observing several cases in which young persons, suffering from fluxes of this character, especially students of medicine, have sickened with typhus, when they had remained but a short time by the bed of those affected by typhus.] *Deutsche Klinik.*

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*On the present state of Nerve-physiology and Pathology.* By Prof. C. ECKARD.

The author dates correctly the new epoch of nerve-physiology from the well-known article of Volkmann, which combined with a spirited critique in one scientific whole all that was hitherto known previous to the discovery

of nervous electricity. As the characteristic of the present efforts, the author designates, 1. The prevailing inclination to comprehend the *essence* and the *laws* of nervous activity; 2. To do this in a genuine *physical* sense, to found a general nerve-physique, whilst simultaneously also much important aid has been furnished to special nerve-physiology. First of all, the advances of nerve physiology will be considered.

In this department, before all others, the classic researches of Bois-Reymond concerning the *electric action* of the nerves, the discovery of a constant electric current existing in living nerves, and, indeed, *only* in living ones, the knowledge of the laws of the same, the indication of definite alterations of this current in active nerves take the precedence. With the latter indication we have first learned to recognize a characteristic property of the active nerve, which was formerly only recognizable externally by its effects. The most important facts determined by Bois-Reymond are the following:

1. *In every living nerve we find electric currents*, as well in a motor as in a sensitive nerve. Each nerve consists of a multitude of electric molecules, which are charged with electric opposites, *i. e.* have a positive and a negative pole, and are connected by a moist conductor. The numberless individual currents arising from the combination of these molecules, combine to a common current, which we recognize by the insertion of a nerve in the multiplicator circle into a conducted branch of a current operating upon the magnetic needle. We add, that in every portion of nerve, however thick, are to be recognized the very same currents of the same direction. 2. At each irritation which affects a nerve at any period whatever, let this irritation be of what kind it may, so soon as it only becomes the cause of a manifestation of the action of the nerve (motion, sensation, secretion), the nervous current exhibits an alteration, which depends upon alterations in the arrangement of the electric molecules. We recognize these alterations again in the conducted branch of a current in the multiplicator circle. 3. If we conduct an electric current through a muscular nerve, the muscle contracts only from fluctuations of this current, but remains quiet when a constant current is conducted through the nerve. But, also, this constant current not merely changes the electric action in the portion of the nerve through which it runs, but in the whole remaining current the electro-tonic condition occurs.

A second important aid to the knowledge of the process of innervation has been furnished by Helmholtz through the measurement, accomplished with the greatest ingenuity, of the *rapidity of the propagation of nervous action*. This, in the nerves of frogs, amounts to 26 or 27 metres per second, in man to 61.5 metres; it increases with exalted temperature, and is probably for this reason greater in man.

From these facts we derive the following conclusions in regard to the essence of the condition of nervous excitation (nervous fluid, nervous agent).

Nervous excitation is propagated with much less rapidity than electricity; the "nervous principle" also can not be an analogue of electric motion. It is presumed that nervous excitation and its propagation consist in exciting and communicating *motions* of individual *material parts* of nerves to their neighbors, like as is the case in the propagation of undulations of air and water. From the evidence of electric molecules in the nerves, we are warranted in supposing that the incitement to motion is not the result of a material principle, but the consequence of opposite electric influence. Bois-Reymond compares the nerve molecules in this respect with a number of magnetic needles, which are so arranged, one after another, that opposite poles everywhere touch. If we turn the first of these needles, this turns the second through the electric influence, the second turns the third, and so on. The propagation of nervous action is therefore of an electric nature, but not in the form of a galvanic current.

The further considerations the author unites with the two important physiological combinations, nerve and muscle, sensitive nerve and central organ. Formerly the motor and sensitive nerve were considered as essentially different, in consequence of the direction of their conducting power. The former could conduct only centrifugally, the latter centripetally. Now, we must suppose in every nerve the same twofold conducting power, since we know, that in the excited nerve a characteristic different electric action exists and is manifested, that this action in every excited nerve, whether it be motor or sensitive, is peripherically propagated on either side of the excited point. A muscular nerve conducts also centrally; but only the peripherically conducted excitation takes effect, since it is connected only at the periphery with an organ responding to the excitation, *i. e.* with a muscle.

**Muscle and Nerve.** The author here mentions first the investigations of later time, which concern the so-called experiments by irritation. Of the electric irritation we know, now, that the contractions are not dependent upon the absolute strength of the exciting electric current, but that a contraction arises only from fluctuations of the strength of the current succeeding each other at infinitely small spaces of time. A contraction, therefore, only arises upon opening and closing the circle, whilst during a constant current the muscle remains quiet. The strength of the contraction depends upon many concomitant circumstances,—upon the size of the portion of nerve inserted in the current, upon the direction of the current along the axis of the nerve, and whether it is directed in a parallel course with the

same, ascending or descending. Here, furthermore, belongs the "*paradoxical contraction*." If we place upon a nerve A, standing in connection with a muscle, a second portion of nerve B, and irritate B electrically, the muscle supplied by A contracts. The so-called electro-tonic condition of the nerve, which we mentioned above, furnishes the explanation. If we conduct an electric current through a tract of a nerve, the electric molecules in all the remaining nerve so dispose themselves, that whenever any two points of its length become connected by a conductor, between these two points and through the conductor an electric current flows. If we place upon an electro-tonic nerve the nerve A, this forms the conductor between two points of the former, consequently becomes traversed by an electric current, which excites it, and thus induces the contraction. This paradoxical contraction shows that the law of isolated conduction does not hold for electric irritation, but an electrically excited (electro-tonized) nerve can impart its excitation to one lying upon it.

Here, also, belongs the so-called *unipolar contraction*, the explanation of which, however, requires a too completely physical introduction to be given here.

Again, to this category belongs the fact, that a *tetanus* produced in a muscle by whatever irritation of its nerves, disappears when a *constant strong current* is passed through a tract of the excited nerve (because this probably displaces the electric molecules in electro-tone, and thus prevents them from following the incitement, called forth by the irritation, to complete excitation). The author refers to the idea of curing tetanus in this manner, but shows also the great improbability of such a result. With the *thermic irritation* of nerves the author has especially occupied himself, and shown that only those temperatures which *momentaneously* disturb the structure of the nerve, induce contraction. So, also, the author has accurately investigated the mode of operation of chemical irritants. All these operate through chemical, or else mechanical relation to one of the chemical constituents of the nerve; they excite the nerve so soon as they chemically, and in an active way, lay hold of the nervous substance, and thereby quickly kill the nerve. Some operate by coagulating the albumen; others by the abstraction of water, &c.

*Sensitive nerve and central organ.* The author first considers the important doctrine concerning the sense of touch, well settled, especially by the classic investigations of E. H. Weber, that the result of the irritation of sensitive nerves is essentially determined by the point at which the nerve is irritated. If the irritation affects the nervous extremities, different irritations produce qualitatively different sensations (temperature, pressure, local sensation), provided the irritation does not exceed certain degrees of in-

tensity. Irritation of the trunk constantly determines a sensation of pain, independent of the quality of the irritation. From these facts it was concluded, that at the ends of the sensitive nerves must exist organs, organs of sense, which mediate the different qualities of sensation. Whether, and how far, the tactual corpuscles of Wagner are to be regarded as such, the author leaves undecided. Since, however, according to Dieffenbach, the brain, in the ether-narcosis, may be at times insensible to pain but sensitive to impressions of touch, the disposition of the ends of the nerves does not suffice for the explanation of the various results of irritation. According to the author, the process in the nerves must be, one upon excitation of the ends, another upon excitation of the trunk, since a qualitative and quantitative *like* irritation produces different effects. If we dip the elbow into a cold fluid, we perceive first cold through the ends of the nerves in the skin, then pain through the trunk.

*Spinal Marrow.* The following principal points have been recently discussed: 1. *Do the nerves of the spinal marrow originate from the brain?* Külliker has sought to prove this, especially by mensurations of the section of the cervical marrow, and comparing the amount with that of the sections of all the issuing nerves. But this calculation is extremely uncertain and deceptive, and, especially in opposition to physiological facts, more particularly the so-called reflex phenomena, proves nothing at all. [Besides Wagner has also refuted this assertion by an anatomical method.] 2. *On the crossing of the nerve fibre in the anterior white commissure.* A partial crossing of the anterior fibres in the white anterior commissure has been generally conceded as proven anatomically and physiologically. [Wagner denies this also. According to him the anterior commissure consists only of fibres which connect ganglionic cells of both halves of the spinal marrow.] 3. *The law of Bell has exceptions* (not naturally in the living body). By irritation of the *peripheric* ends of several sensitive roots, and by irritation of the *central* ends of the motor roots, we can produce contraction; nevertheless, only by electric irritation, in which case the contraction may be explained as a paradoxical contraction. Whether the author was not yet acquainted with the new doctrines of Pflüger concerning the sensory functions of the spinal marrow, or intentionally omitted to mention them, we know not. We shall only say here, that Pflüger ascribes to the spinal marrow as well as to the brain the capacity of conscious sensation and of voluntary incitation of motion, and endeavors to show that many of the so-called reflex movements of decapitated animals are voluntary motions. [The author makes no reference to the views and experiments of our countryman, Dr. Dowler, upon this point, which, if I mistake not, were anterior to those of Pflüger. H. N. B.]

*Brain and cerebral nerves.* Concerning the brain and its functions, recent time has added nothing further to our knowledge. The author mentions as the only new discovery of importance, the observation of Bernard, that after irritation of the floor of the fourth ventricle, sugar appears in the urine,—that is, sugar superabundantly formed in the blood, or undergoing no further metamorphosis, is excreted by the kidneys. But this novelty is yet a completely unsolved riddle. As concerns the cerebral nerves, the author observes, that most of the latest notions concerning their action are doubtful, because no experiment offers a guarantee that a unipolar or paradoxical contraction does not give a false signification. He, however, gives the following facts: 1. *Oculo-motorius.* This nerve, according to recent observations, has an influence upon the contraction of the pupil. 2. *Trigeminus.* The contraction of the pupil, which follows upon division of this nerve, appears not to depend upon a reflection upon the oculo-motorius, since it occurs also when the latter is divided. Manifold pathological results appear to furnish the proof that the ramus lingualis mediates sensations of taste. Ludwig's experiments concerning the influence of this nerve on the salivary secretion are very interesting. Artificial irritation of the branch going to the sub-maxillary gland excites and increases the secretion, and indeed not by an effect upon the muscular fibres of the vessels or of the gland, not by increasing the blood-pressure, but, according to Ludwig's hypothesis, by an alteration of the physical properties of the secreting membranes.

3. *Facialis.* Nuhn has determined the motion of the velum upon irritation of this nerve in the decapitated. It is farther shown that it presides over the secretion of the parotid (through the track of the chorda tympani). 4. *Glossopharyngeus.* Ludwig and Rahn have shown, that the salivary secretion becomes excited by this nerve in a reflex manner. 5. *Vagus.* a. *Its influence on the motion of the heart.* The proposition of Ed. Weber, that after division of the vagus the heart beats quicker, and remains quiet after irritation with the rotatory apparatus, has become extended; irritation of a vagus is sufficient for this effect; besides the electric irritation a chemical one is also efficient. A paralyzing influence upon the ganglia of the heart presiding over motion is therefore ascribed to the vagus. b. *Effect of the vagus upon the respiratory functions.* Division of the vagi protracts the respiratory movements. It is thought, therefore, that the vagi impel the centres of respiratory motion, through a rhythmic impulse, to excitation of the respiratory nerves. Irritation of the central stumps of the divided vagi also really accelerates respiratory motion, so long as the intensity of the irritation is not too great. How the oedematous infiltration of the pulmonary vesicles, occurring after section of the vagi, is to be explained, is not yet ascertained. c. *Influence of the vagus upon the stomach and digestion.* It is

determined that the vagus has an influence upon the motion of the stomach, but not alone, since movements of the stomach still occur after its division. Bidder and Schmidt have more accurately determined the influence of division of the vagus upon the chemismus of digestion. The diminished secretion, which is not at all constant, depends upon the detention of the saliva by the paralyzed oesophagus; the same circumstance produces also diminution of the free acids. Were this want of saliva compensated by injection of water into the stomach through fistulae, these indirect results of section of the vagus were removed.

*Ganglia and sympathetic nerve.* In relation to this part of the nervous system the author sets forth chiefly, that recent times have furnished little that is decisive; the confused obscurity which rests upon the anatomical and physiological disposition of these nervous structures and complexities has not yet disappeared. The extraordinary difficulty of the investigation explains the hitherto fruitlessness of the numerous diligent labors in this department. The author considers the following general propositions as proven:—

1. The organs supplied by the sympathetic are not subject to the will; but in certain conditions of the cerebro-spinal organ the latter attains an influence upon the former, as in emotion, diseases of the brain and spinal marrow, &c.
2. The department of the sympathetic contains *self-exciting* points, since we find movements in the organs belonging to it which neither depend upon the brain, spinal marrow, or exterior irritation.
3. In the system of the sympathetic, sensitive fibres occur, but which do not mediate definite sensations of place, pressure, temperature, and increase their action under certain circumstances.
4. All hitherto known facts show, not incontestably, the occurrence of *reflex movements* between parts of the sympathetic without the mediation of the cerebro-spinal organ.—*Schmid's Jahrbücher, May, 1854.*

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*Practical Observations on Cauliflower Excrescence, &c. &c.* By ROBERT JONES, A. M., M. D.

In the Dublin Quarterly Journal of Med. Science, Dr. Jones reports a case in which he excised the cervix uteri. The following condensed report will give our readers the prominent points of the case.

Mrs. M.—, aged twenty-nine years, a scrofulous, delicate-looking woman, married eight years, and mother of four living children, was admitted into the Meath Hospital on the 10th of November, 1852. She stated that she had been in bad health for a year or so previously. Her labors were

quick, natural, and followed by good recoveries. The catamenia, which were painless,\* first appeared at sixteen years of age, had regularly returned monthly, except during pregnancy and lactation, up to the seven months immediately preceding her admission; during the whole of which period there had been a continued and excessive haemorrhage per vaginum, confining her for the most part to the bed. The face was of a dirty yellow, anaemic, and malignant aspect; the eyes sunken and surrounded by a dark circle; the digestion much impaired, with loss of appetite, flesh, and strength; the bowels regular, but much distended from flatus. She suffered very much from constant giddiness, accompanied by fear, but without cephalalgia, from anhelation on the slightest motion, much pain over the hepatic region, in the breast under the nipples, across the loins, accompanied by weakness, and over the sacrum, and down the legs; there was also a constant burning sensation over the uterus, a darting, flancinating pain up the vagina, with uterine inertia, and great enlargement of the inguinal glands. For a short while antecedent to the haemorrhage, a vaginal discharge, of a purulent and sometimes of a watery nature, was present, which latter was not at any time copious, nor preceded by moisture of the parts. The haemorrhage was excessive from its invasion, and not gradual, as in most cases. On examining digitally, about half way up the vagina, which was far from being relaxed, there was found a large, firm, lobulated, insensible tumor, growing from and embracing the entire of the os uteri, lying obliquely against the sacrum, and, in consequence of the brittleness, breaking down with loss of blood on the least degree of pressure. The speculum being used, was immediately filled with blood, which, being removed by a piece of sponge, revealed the rough tumor already described, of a bright flesh color. The os was patulous, but the cervix appeared healthy above the growth.

On the 12th of Nov. Dr. Jones threw a ligature of twisted dentist's silk, by means of Gooch's double canula, around the cervix uteri, as high up as he could possibly reach, being convinced that the more of the sound tissue he removed, the better would be the chance of success. The patient complained very much of pain in the uterus, immediately after the application of the ligature. Fearing subsequent inflammation, he prescribed a pill containing four grains each of hydrarg. cum creta and Dover's powder, to be taken every third hour. In the evening it is reported that the pain in the uterus had not all abated, but there was no abdominal tenderness. It not

\* Some authors have stated that the great majority of females suffering from cancerous affections of the womb have had dysmenorrhœa in early life. In very few of those whom I have seen for some years, had there ever been any derangement of menstruation during that period.

† Sir C. M. Clarke states that the pain in this disease is never of this character.

being considered advisable to loosen the ligature, if possible, she was ordered a draught of ipecacuanha wine, two drachms of water of acetate of ammonia, and half a drachm of tincture of opium, in an ounce of water, and a cathartic draught of rhubarb and sulphate of potash in the morning.

13th. She did not sleep during the night; pain much abated, but a great amount of tenderness over the uterus, with quick pulse; the ligature was tightened, and the vagina was syringed with warm water. The abdomen was ordered to be frequently fomented, and a pill containing half a grain of calomel, a grain of blue pill, and a fourth of a grain of opium, to be taken every second hour, with, if requisite, a draught containing forty drops of laudanum at bed time.

14th. She slept well during the night; pain and all tenderness completely removed; she complained much of her mouth being sore: all medicines to be omitted. The ligature on being tightened gave way. The case, not being urgent, all further interference, with the exception of syringing out the vagina, was deferred until next visit.

15th. She passed a very restless and sleepless night; tongue foul, pulse quick, and in fact a high state of irritative fever present. On making a vaginal examination, he discovered that the cervix uteri had been partly cut into by the ligature, and that the tumor was in a state approaching to gangrene; with a dirty, foetid discharge issuing from the vagina, to which state of matters he attributed the fever. Under these circumstances, fearing that phlebitis might ensue, he introduced Weiss's trivalve speculum, drew down the os uteri by means of a double vulsellum, and excised the cervix with a blunt-pointed scissors, curved on the flat, Messrs. Smyly and G. H. Porter kindly assisting. No hemorrhage, ever so trifling, followed the operation. He then syringed out the vagina, and passed the uterine sound, which he did each day during her stay in hospital. He used the actual cautery on two occasions subsequently to the removal of the cervix, with the two-fold view of destroying any portion of the disease that might possibly have been left behind, and of expediting cicatrization.

From the day of the removal of the cervix, the vaginal discharges ceased. She left the hospital, the wound being perfectly healed, on the 22d of November, which was the eleventh day from the application of the ligature, and the eighth day from the amputation.

On the 21st of December this female was menstruating *without pain*; she had then become fat; had regained her natural healthy color and spirits; the enlargement of the inguinal glands had disappeared; and she was in the enjoyment of better health than she had been for years.

Cicatrization of the wound, consequent upon operation, took place much earlier in this than in any other case which he finds recorded—a fact he is

much inclined to attribute to the use of the actual cautery. Here the parts were perfectly healed on the eighth day after the separation of the cervix; whereas he finds that in others the process was not completed for a period varying from twenty days to six months.

On the removal of the cervix in this case, he passed the uterine sound each day, until the healing process was completed, and for some time afterwards; a practice we had been in the habit of adopting for some years past in cases where disease of the cervical canal, or extensive ulceration of the os uteri, requiring the use of powerful caustics, was present; as in such there is a great tendency in this cavity to narrow or close up—in the one producing dysmenorrhœa, and in the other amenorrhœa. Very recently he had under his care cases illustrative of this position, the subjects of which were cured by the occasional passage of the sound, &c.

The following are Dr. Johns' deductions.

1. That cancerous affections, when confined to the cervix uteri, are in many cases successfully treated by removal.
2. That the only chance of preventing a return of the disease is to remove in a healthy part the cervix from which it grows.
3. That the best and most expeditious operation is amputation of the cervix in a part free from disease.
4. That a haemorrhage is very likely to follow such an operation: a ligature ought to be thrown around the cervix, as high as possible, for twenty-four or thirty-six hours before amputation.
5. That cauliflower excrescence is a disease to which this treatment is very applicable; as it rarely, if ever, extends beyond the neck of the uterus; and as it is one of the forms of cancer which is least liable to return after the excision of the parts.
6. That amputation of the cervix, in hypertrophy and such like affections of this part, which are curable by simpler means, is not justifiable.
7. That extreme prostration alone, or enlarged superficial inguinal glands, ought not to be a bar to operation.
8. That as inflammation in many forms is likely to follow this operation, an appropriate preventive treatment ought to be adopted.
9. That the use of the actual cautery expedites cicatrization after the removal of the cervix.
10. That as amenorrhœa and dysmenorrhœa are likely to follow on extensive ulceration of the os and cervix uteri, and also when these parts have been removed, the uterine sound ought to be passed from time to time during cicatrization, and for some time afterwards.
11. That with a view to correct the cancerous diathesis, the patient might be put under a course of treatment for some time previous to, and subsequent on, the operation.

12. That a particular form of vertigo is a frequent symptom, and an important diagnostic of uterine disease.
  13. That as females suffering from uterine affections are very prone to inter-current affections, which sometimes prove fatal, every means should be adopted to prevent their occurrence.
  14. That in all cases of suspicious vaginal discharge, manual examination *at least* ought to be employed.
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*An old Child at Birth.*

[We extract from the Transactions of the N. Y. State Medical Society the following interesting case of extra-uterine conception, reported by Dr. William H. H. Parkhurst, of Herkimer. The old baby, with his baby-house, was exhibited at the last meeting of the State Society.]

Mrs. Eddy was married at the age of twenty years, in New Lebanon village, Columbia county, and with her husband, Amos Eddy, came in a very short time to the town of Frankfort, Herkimer county, where they both lived and died: he at the age of seventy, and she at the age of seventy-seven.

After they had been married for the space of seven years, she became pregnant, and the symptoms attending the early stages were nothing different from ordinary pregnancies. The catamenial secretion, which had always shown itself in a proper manner before this, and which made its appearance about the age of fourteen, now ceased, attended more or less with a fullness about the head, with nausea and occasional vomiting, and many other symptoms which usually accompany this important change of system. As the different months passed away, quickening, as it is termed, took place at the usual time, and after that, motions of the child were felt, and increased in strength during the remaining part of nine months, and, as she firmly stated, for many years after. As so many years had already passed since their marriage, and they had not been blessed with an heir, they both looked forward to the time when she should present to her husband an offspring, to crown each other with what they most desired. And in the expectation of all this, the necessary preparations were made, all the little fixings were selected and completed, and laid away in a careful manner for ready use; but like the to-morrow, the wished-for time never came.

At eight months and a half, while preparing a boiled dinner in a large kettle over the fire, the hook gave way suddenly, and the pot fell forcibly into the fire, upsetting and scattering the fire in all directions, and producing, as we might suppose upon the nervous system of a pregnant woman, a

shock of surprise and consternation. In the space of two or three hours from this, labor-pains followed, and continued all the afternoon until evening, and with such regularity and force that her lady friend, who had been summoned to her assistance, advised sending for her physician, and Dr. Farwell, who lived in the town of Litchfield (long since numbered among the dead), was sent for, and arrived in the fore part of the evening; after sitting awhile, he told her that he thought he would put her to bed in about three hours; but instead of the labor going on in a more determined manner, as time advanced, her pains began to diminish both in strength and frequency, and in the morning they had left her altogether, and the doctor went home with instructions to be sent for immediately when labor should again come up. The day passed, and she remained in a measure comfortable, and so on day after day, which was thought but little of from the fact the time for her confinement had not expired by two weeks. Mr. Eddy kept his horse up from pasture as a minute carrier, from the time the doctor left for the space of three weeks; and finding that the probabilities were no more favorable for his use than before, he turned his horse again to pasture. About this time Mrs. Eddy's health began to fail; anxieties, which before had been slight, increased; her physician was consulted with deep solicitude, and from day to day her case was carefully watched and prescribed for; each week that followed produced still more anxieties, not only with herself and friends, but with the physician. Already her health became so poor that she kept her bed altogether; her physician became alarmed, and believed that her case was not only enshrouded in much mystery, but that she could not survive long unless a favorable change was soon brought about; hence the views of different physicians were obtained, and a consultation of many of the most eminent medical gentlemen in the country were congregated together, such as Drs. Guiteau, Hull, and the older Coventry, of the city of Utica, and Dr. Joseph White, of Cherry Valley, &c., to deliberate more closely in her case. The result of this investigation led to nothing satisfactory; for no individual physician, nor the whole together, could diagnose the true nature of her condition, though all believed it to be some peculiar growth of the uterus; but none could believe it to be a child.

Month after month rolled away, and at the expiration of about one year and a half, after the most severe suffering, she began slowly to improve. During this time she became greatly emaciated, though her bulk of abdomen, which had been previously large, did not very much diminish. In a gradual manner she fully regained her health; and when she had so far recovered that she could travel around the country, she consulted very many physicians.

During the time that intervened between her recovery and the time of

her death, she enjoyed the most perfect health, with the exception of occasional attacks of severe colic, and a spasmody contraction of the abdominal muscles, somewhat similar to *travail*, which were often so violent that it required medical attendance to remedy the evil. For the first thirty years after her recovery she would often have these attacks, similar to labor, and call in her friends to advise for her, and sometimes would send for a physician. Many times it would require strong anti-spasmodic medicines to control the difficulty.

In stature she was about the middle size, but rather more athletic than the medium. She would carry this burden and do the labor of any ordinary business, and endure it with perfect ease. She would walk, the summer previous to her death, when she was 76 years old, five miles, to our village and back, as quick as any girl at the age of twenty; and this she would do as often as every two weeks, in good weather.

One thing I have neglected to mention, and which, in a physiological point of view, is of some consequence in the history of this case; and that is, after she recovered her general health the uterus recovered its healthy function, its secretion became established, and continued in a regular healthy manner until the usual period of about forty-five, when it ceased in the usual gradual way.

There was nothing interesting connected with the postmortem examination worthy of remark, aside from the fact that a perfectly-formed child was found, weighing six pounds avoirdupois, and was removed in the presence of about twenty persons, mostly aged matrons. The position of the child was found with the occiput resting on and against the symphysis pubis, its face and front looking towards the spine of the mother, reclining a little on its left side, and lying a little to the right of the spine or median line of the abdomen. It had no adhesions or connections with the mother except to the *fallopian tubes*, and the blood vessels which nourished it, which blood vessels were given off from the mesenteric arteries.

This preparation, as is readily seen, is almost entirely enveloped in a firm, dense cartilage. The limbs and head, trunk, &c., are flexed and fixed, as it were, in a proper manner; and then, while in this condition, as though nature in reality looked for convenience in the long necessity for the future, had spread over this material, not only to tie up the extremities, to prevent occupying too large a space, but to form a smooth surface to avoid danger to the mother by lessening friction. The thighs are flexed close to the body, the leg and foot tight to the thigh, the arm flexed close to the body, the fore arm close to the arm, the elbow resting on the knee, the head thrown forward with its face entirely resting upon the sternum, with the hands resting upon the parietal protuberances. This cartilage envelopes the whole specimen like a canvas sack, fitting it in every irregularity. It seems

to be formed in consecutive layers, like the grains of the growing tree. One leg and foot, and one elbow is enclosed, instead of cartilage, in an ossific or earthy deposit, upon the side which rested upon or near the spine of the mother. This cartilage, when first taken from the abdomen, was as white and smooth as white earthen. The blood vessels were some of them partly filled with blood.

This woman was born in the year 1775; married in 1795, making her 20 years of age; became pregnant in 1802, seven years after she was married; died in the year 1852; which time, being rightly computed, makes fifty years that she carried this fetus.

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DR. SIMPSON *on Spurious Pregnancy.*

DR. Keiller relates the case of a young woman who was supposed to be pregnant, by her friends, on account of the large size of her abdomen, and the occurrence of pains. Her supposed labor continued for many weeks, and the Cæsarian operation was proposed as the *dernier resort*, by an irregular practitioner. When Dr. Keiller saw her, and made a careful examination, he attempted, but in vain, to disabuse the minds of her relations that she was pregnant. A variety of treatment was instituted, but with no avail; indeed, change of air was the only thing that seemed to do her any good. After one of these removals, she was able to return for a short time to her usual employment at a mill, though her abdomen always remained of a large size. Dr. K. then lost sight of her, until eight years afterwards she presented herself in Edinburgh, with a child that she had had in the interval, complaining that her old symptoms were re-appearing. Her abdomen was very large and tympanitic. She was sent into the Maternity, where, under the advice of Dr. Simpson, she was put under the influence of chloroform. The abdomen immediately became flat, and the uterus was felt to be of its normal size. When the effects of the chloroform passed off, however, the abdomen again resumed its enlarged form. She left the Maternity, and when last heard of, was still suffering under her obscure complaint.

Dr. W. F. Gairdner had lately perused an article published by Mr. O'Ferral, of Dublin, on Abdominal Tympany, in which a similar observation on the use of chloroform in the diagnosis of such cases was made, but with no mention of the previous investigations of Dr. Simpson.

The President, Prof. Simpson, said that his own observations on the use of chloroform in the diagnosis of such cases, would be found in the same journal, at least three or four years previous to the appearance of Mr. O'Ferral's paper. He believed that cases of spurious pregnancy were often met with in private practice; for many a married lady would acknowledge, when

questioned, that she had once or twice thought herself pregnant, when, as the result showed, she was not. He had several cases in his own practice. There were instances in which patients progressed onwards to near the full term of pregnancy, suffering all the usual symptoms and discomforts of that state—sometimes phenomena exactly like those of labor came on at the full term. This seemed to have occurred in Dr. Keiller's patient. Dr. Simpson had seen several analogous instances of spurious pregnancy terminating in spurious parturition. Besides the cases of pseudo-pregnancy in which the patient went on with the usual symptoms of pregnancy till near or up to the full period of labor, there were other varieties of this curious morbid state. In some, for example, the affection lasted only for a few months; in others, they occasionally continued far beyond nine months, and became, as it were, chronic in their character. As to the symptoms themselves, they consisted of the presence of more or fewer of all the usual sympathetic symptoms of pregnancy, such as swelling of the abdomen, nausea and sickness, a feeling of quickening and motion of the child, &c., &c. Dr. K. had stated that the mammary signs were not well marked in his patient,—sometimes, however, they were; and Dr. S. had sketches illustrative of this fact, executed by the patient herself during a state of spurious pregnancy, and in whom, in a subsequent veritable pregnancy, her first, the areolæ did not present a deeper tint than they had done during the pseudo-pregnancy. As to the sensations which had been described in such cases, they were very frequent, and sometimes there were true motory contractions in the abdominal walls.

Dr. S. was inclined to believe that the malady was connected with the ovary. In one aggravated case which had fallen under his observation, there was marked ovaritis, and the ovary subsequently suppurated. Again, it was observed that, although menstruation did occur in the cases which had been noticed, yet it was much scantier than usual, and sometimes the catamenia were wanting for several months. It was well known that the complaint was not peculiar to the human female. Harvey had long ago remarked that, in hounds who were well fed, many of the phenomena of pregnancy, such as swelling of the abdomen, and the presence of milk in the mammae, occurred both subsequently to unsuccessful sexual intercourse, and also frequently after seasons of heat, and during which there was no intercourse with the male. Dr. S. believed that, when some of the cases of the so-called hysteria in unmarried females were inquired into, they would be found, as he thought he had repeatedly seen, to be really symptoms only of spurious pregnancy. Dr. K. had alluded to the retraction of the limb, as having been a well-marked symptom in his patient. Dr. S. had seen a case many years before the introduction of chloroform, in which the symptom was a prominent one. The lady had been under treatment in

Paris; and on her return to Scotland, a surgeon examined her, and recognized, as he supposed, the presence of a large ovarian tumor. Dr. S. was consulted; and on percussing, he found the abdomen quite tympanitic, and of course negatived the tapping, and the presence of any ovarian tumor. The leg, in this case, was much drawn up; and he was informed that, while in Paris, the heel was for a time closely applied to the back of the neck. With regard to the nature of the abdominal swelling in spurious pregnancy, he had tried various experiments to ascertain its cause, but in vain; and as yet he could come to no decided conclusion on this subject. It had been suggested that while the patient was deeply under the influence of chloroform the contained air escaped unobserved; but in one very marked case in the hospital, means were employed to detect the escape of the air; but all such failed. The diaphragm he believed to be the chief agent in producing the swelling. The chloroform, he believed, acted by relieving the muscles, diaphragmatic and abdominal, from the influence of reflex action, and permitting their relaxation. Dr. K. had classed the interesting case which he had communicated under the head of hysteria, but some of the cases to which Dr. S. had alluded could scarcely be properly included under that designation. Dr. Matthews Duncan had lately seen a case where the explanation of abdominal swelling was completely made out. A young lady had been long in bad health; her chief symptoms were referable to the left hypogastric region, which was very tender, dull on percussion, and extremely distended. Called in consultation, he recommended the production of deep anaesthesia, as a diagnostic aid. Long before the girl was insensible he remarked the great anterior arching of the lumbar vertebrae, which, as insensibility came on, disappeared; the spine coming to touch the mattress, from which it was before far removed. At the same time (no doubt from relaxation of the diaphragm and anterior abdominal muscles) the abdominal distension disappeared, and also the left iliac fulness, to the great relief of her anxious friends. He thought it very important to distinguish cases of spurious pregnancy from cases of false pregnancy. Real cases of the former disease were common in the lower animals, but he thought not very common in women. From these, where not only was there no deception, but the real existence of many of the signs of pregnancy, should be carefully separated cases of false pregnancy. These last were of various kinds. In some the female merely wished to deceive, in others she was herself simply deceived, easily undeceived, and the phenomena found were explicable without supposing spurious pregnancy. In a third class of false pregnancies, we had a good example of the so-called electro-biological state. The female's mind was impressed with the unshakable conviction that she was pregnant; and under these circumstances some of the symptoms of pregnancy were induced.

[*Ed. Med. Monthly.*

*Case of total Inversion of the Uterus, in which extirpation of the entire organ was successfully practised.* By E. GEDDINGS, M. D., Professor of Surgery, &c., Medical College of the State of South Carolina.

On the 16th of May, 1854, I was requested, by Dr. A. P. Pelzer, to meet him in consultation, in the case of a negro woman belonging to Mr. Robt. White, in King-street. On my arrival, Dr. Pelzer called my attention to a large pyriform tumor, equal in magnitude to a foetal head at the full term, which, proceeding from within the vagina, hung pendant between the thighs. This tumor was large and rounded below, but contracted into a rather thick pedicle above, which could be traced about three-fourths of an inch within the vulva, at which point its contour was surrounded by a kind of *cul de sac*, beyond which the finger could not be passed. Its whole surface was covered by a rough, thickened mucous membrane, abraded and ulcerated on many points, considerably inflamed, and disposed to bleed when roughly handled. In the general aspect, it bore a strong resemblance to a case of prolapsus of the uterus of long standing; but the uniform roundness of the most dependent part, together with the absence of the os tinæ, served at once to convince us that it was of a totally different nature.

The first supposition that presented itself to my mind was, that it might be a case of prolapsus of the bladder, of such long duration that the walls of the organ had become very much thickened, and otherwise altered in texture. But on introducing the catheter, and passing my index finger around the neck of the tumor within the vulva, I was enabled readily to discover that it was a case of complete inversion, with extensive hypertrophy, of the uterus, of ancient date. The orifice of the uretha was but little removed from its normal position; and in passing my finger up, on the posterior and lateral aspects of the neck of the tumor, as far as the reflected walls of the vagina would allow it to reach, I could distinctly discover the elastic feel imparted by the convolutions of the small intestines, which rested on the partially inverted walls of the vagina.

How long the inversion had existed could not be satisfactorily ascertained; but as there is reason to suspect that the accident must have occurred at the period of her last delivery, an approximative conclusion may be drawn from the fact that her youngest child, a daughter, was present, and had the appearance of a person of from eighteen to twenty years of age. The report of the woman herself was, that she had been greatly annoyed by the tumor for many years, but had generally been enabled, by partially forcing it up into the vagina, and sustaining it there by means of a T bandage, to pursue her ordinary avocations. Latterly it had increased so much in size as to render this impracticable; and at the period of our visit, any attempt at replacement, however partial, was productive of excruciating pain. She

was, besides, suffering so much from engorgement and inflammation of the inverted organ, that, considering this, together with the partial and uncertain benefit likely to accrue from any merely palliative treatment, it became a serious question how we could most readily and efficiently relieve our patient.

Reflecting on all the circumstances of the case, it occurred to me that excision of the entire inverted organ presented a rational prospect of relieving, not only the present sufferings, but also the cause of much future annoyance. The vagina being also partially inverted, the danger of such an operation was materially diminished; inasmuch as we would, in consequence of that condition, be enabled to excise the entire mass by cutting through the vaginal walls, thus leaving the substance of the uterus untouched.

Dr. Pelzer concurring with me, I seized the neck of the tumor as high up as possible, between the thumb and index finger, and manipulating in such a manner as to satisfy myself that it contained none of the convolutions of the intestines, I proceeded to include it in a strong ligature, for the two-fold purpose of preventing the protrusion of the intestines and obviating any serious haemorrhage. The neck of the tumor was then cut through, a little below the ligature, with a single swipe of a probe-pointed bistoury.

The operation was exceedingly simple and easy; was attended with no great pain; and, as may be supposed, was executed in a few seconds.

The after-treatment presented no features of particular interest; and the case progressed so favorably that, after a few days, I was enabled to discontinue my visits, leaving the patient in the hands of Dr. Pelzer; who, in a short time, transferred her to Prof. Frost, the family physician, who, at the period of our attendance, was absent from the city. She speedily recovered, and, as I understand, has since done well.

On making a section of the tumor, it was found to present a solid, homogeneous mass, of a greyish white texture and fibrous appearance. The whole cavity formed by the inversion of the walls had become obliterated by adhesions between the opposing peritoneal surfaces; but the point of junction between the vagina and the contour of the cervix could be distinctly recognized; the incision, as stated above, having passed through the walls of the vagina.

Partial and complete extirpation of the uterus, for various objects,—inversion, prolapsus, carcinomatus, and other degenerations of its structure,—has been so often practised, that the simple operation the description of which I have detailed, possesses no claims to interest in point of novelty; yet it has some value as affording an additional instance to prove that, under similar circumstances, the unfortunate victims of a displacement so deplorable, may often be relieved of much suffering and inconvenience. It might

be interesting to collect full references to the numerous cases in which extirpation has been practised on account of inversion; but, as I have not time to execute the task, I must content myself with this brief and imperfect exposition of a single case.—*Charleston Med. Jour.*

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#### *Pessaries in the treatment of Prolapsus.*

[Prof. Dugas, editor of the Southern Medical and Surgical Journal, in the last number of this Journal strongly condemns the use of pessaries. Our limits will only permit the following extracts.]

We insist that the use of pessaries does not, and cannot, remove the cause of prolapsus uteri; viz., relaxation of the physical supports of the uterus. In the first place, unless all our principles of physiology and pathogenesis be erroneous, the presence of a foreign body wedged into the vagina and against the os tinctæ, with sufficient force to obviate prolapsus uteri, and continued for any length of time, must necessarily induce a pathological condition of the mucous surface more or less serious, if there existed none before, and materially aggravate such as may have been present previously. This is so self-evident that no argument can be adduced against it, save such as may be derived from *experience*—of the value of which we have already spoken sufficiently.

Pessaries *cannot* remove the relaxation upon which principally depends prolapsus uteri; because instead of increasing the tonicity of the tissues, they lessen it. This is especially true with regard to every variety of pessary, except those provided with a stem. All the instruments of the kind which derive their support by resting upon the vaginal walls, whether their form be that of a disc, of a globe, or of a plug, must of necessity dilate the canal, and thus impair its powers of resistance: the contractility of its muscular fibres and the elastic retraction of its other tissues will be diminished to such a degree that the size of the instrument itself will soon have to be increased. And yet we are asked to believe that a canal thus dilated to the uttermost, and relaxed in a corresponding degree, can, after ceasing to use the pessary, prevent the descent of the uterus, which it could not accomplish before; in other words, that the prolapsus can be *cured* by dilating the vagina! We must confess that our credulity is not adequate to the requisition. We have already observed that our experience is utterly opposed to the admission of that of others.

*On Bright's Disease.* By Dr. H. BENCE JONES, F. R. S., Physician to St. George's Hospital.

Congestion causes the diffusion of albumen, fibrin, and blood globules; and a decrease of the specific gravity of the urine at the same time occurs, in consequence, probably, of the congestion hindering the escape of some substances out of the blood. By Bright's disease, precisely the same effect on the urine is produced. Between the urine passed by a patient after the cholera, or after scarlet fever, and the urine of a patient with Bright's disease, I see no difference whatever, either chemically or microscopically. The low specific gravity in Bright's disease is to me produced by exactly the same cause as the low specific gravity when the kidneys are inflamed after injury of the spine, or when they are congested in cases of chylous urine. Generally, the decrease of specific gravity may be taken as the index of the extent to which the kidney is affected ; that is, the lower the specific gravity of the urine when albumen is present, the greater the alteration in the circulation through the kidney ; the greater the congestion in chylous urine and after cholera ; the greater the inflammation in spinal cases, and the greater the so-called degeneration (the effect of congestion and inflammation) in Bright's disease.

There are two opposite classes of cases of Bright's disease, which require to be pointed out as exceptions to this law. In one class of cases there is considerable thirst, and very large quantities of urine are passed daily ; and the specific gravity is consequently thereby reduced. In the opposite class of cases, the quantity of urine passed daily is exceedingly small ; and hence the specific gravity rises sometimes very considerably above the healthy standard.

I shall illustrate both these classes by some examples.

A medical man was sent to me from the country, under the impression that he was suffering from diabetes, as well as Bright's disease. He had no urine with him, and I asked him to come the next morning with the urine made at night. The following day he brought four quart bottles full, which he said was about the usual quantity passed in twelve hours. It contained no sugar, had a specific gravity of 1006, and was highly albuminous.

A woman, aged 43, who had œdema of the legs two months, was in the habit of passing three quarts of urine in twenty-four hours ; the specific gravity usually was 1007 to 1010. She always complained of great thirst. On one occasion, the quantity of urine was three quarts in fourteen hours ; the specific gravity was then 1004.

A farmer, aged 50, was brought to me for diabetes. The urine was highly albuminous, contained no trace of sugar. The usual quantity was

seven pints in twenty-four hours ; the specific gravity was 1010. His only complaint was of head-ache.

Many similar cases I might bring before you ; but these are sufficient to show that the quantity of urine must be taken into account before any conclusions as to extent of the degeneration of the kidneys can be drawn from the specific gravity of the urine.

I pass on to the opposite exception,—to the law that the specific gravity indicates the degree of disease of the kidney.

A woman, aged 38, had swelling of the legs for three months. She had a healthy, florid look. The dropsy was excessive. At one period of her illness, only three ounces of urine were secreted during one night ; the specific gravity was 1036.2. It was intensely albuminous, loaded with urates, and contained many fibrous casts. For six weeks after her admission into the hospital, the quantity of urine was seldom more than half a pint in twenty-four hours ; the specific gravity was from 1027 to 1033. In six weeks more, the urine became more plentiful, specific gravity 1017.4. She gradually became comatose, and died.

A woman, aged 21, had swelling of the legs for twelve months. They were always most swelled when the catamenia were present. The face was flushed and full. In twenty-four hours, half a pint of urine was made ; it was exceedingly albuminous, loaded with urates ; specific gravity 1035. She complained of sickness and drowsiness. By aperients and the vapor-bath, the urine became clear. The specific gravity fell to 1030, and the dropsy was lessened. After she left the hospital, I lost all knowledge of the progress of the disease.

Other cases like these I have seen ; and from them I cannot but warn you from founding a favorable prognosis from urine of high specific gravity, even when urates are precipitated.

These exceptions lessen considerably the value of the knowledge to be derived from the specific gravity of albuminous urine ; but by accurately observing the quantity of urine as well as its weight, you may approximately determine the amount of congestion in the kidney ; and, if this be frequently determined, the existence and degree of the disease of the kidney may be foretold.

Having spoken of the quantity and specific gravity of the urine in Bright's disease, I will pass on to the quantity of albumen in the urine.

In my last lecture on chylous urine, I showed you how rapidly the urine may vary in the quantity of albumen which it contains ; and in this, as well as in at least one other disease (mollities ossium), large quantities of albuminous substance may be thrown out by the urine without the existence of any serious disease of the kidney. The quantity of albumen is a test of the amount of congestion of the kidney at that time ; and if at all

times a large quantity is found in the urine, it indicates that the kidney is always highly congested, and it becomes most probable that this is produced by organic changes in the texture of the kidney. Thus the amount of albumen in urine is often considered as bearing a direct relation to the amount of degeneration in the kidney. If this were so, then little albumen in the urine would, on the other hand, indicate slight affection of the kidney; whereas there may be the most extensive disease of the kidney, and some cause may be in action which temporarily prevents the congestion of the kidney (as, for example, some determination of blood to some other part of the body), then the amount of albumen in the urine may be very much diminished, and sometimes none at all may be detectible.

A laborer, 55 years old, was admitted on the eighth day, of acute pleurisy of the left side. The heart was displaced, the cavity of the chest being full. There was a history of oedema some months previously; and as his heart was healthy, the urine was carefully examined, but no trace of albumen could be found. The effusion increased: the day but one after his admission, the urine was again examined; it was quite free from albumen; specific gravity, 1025; it was not nearly so deep colored as it usually is found to be the case in pleurisy. A week after his admission the difficulty of breathing increased; he had an epileptic fit; the urine was still not deep colored, contained a little urate of ammonia; specific gravity, 1022; it gave a precipitate of earthy phosphates by heat, nearly clearing with a drop of dilute hydrochloric acid; nitric acid alone gave a slight cloudiness. On account of the difficulty of breathing, paracentesis was performed: eighteen ounces of purulent fluid were drawn off. Shortly after the operation, the breathing was free; two hours after, the pulse was irregular and unequal, and the difficulty of breathing was nearly as bad as before. During the night he had three attacks of convulsions: in the last he died.

Feb. 9, 1847.—On examination, both kidneys were highly granular.

Sometimes the albumen is absent only at the commencement of an acute inflammation of another part.

A youth, aged 16, was in St. George's Hospital, under Dr. Chambers. He had some oedema and much fever, with rigors. In a day or two he complained of excessive pain in the left side; the urine did not coagulate with heat alone, and very slightly with nitric acid. In four days the heart was pushed to the right of the sternum; the fever was diminished; the urine was more coagulable by heat and nitric acid; one specimen had specific gravity 1015, another 1010. At the end of another fortnight, the urine remained still coagulable by heat and acid. On account of the difficulty of breathing, paracentesis was performed, and about four ounces of pus were drawn off from the chest. The difficulty of breathing increased, and he died forty-eight hours after the operation.

When the capsules of both kidneys were removed, the surface appeared quite smooth; the vessels were injected; the substance looked more white than natural. On section being made, there was an increase of cortical structure, which was much more mottled than natural.

These, and many such cases, prove that the quantity of albumen does not indicate the amount of disease in the kidney; but it does show the amount of congestion at the time of the observation. A highly diseased kidney may be very slightly, or not at all congested; and a highly congested kidney may be very slightly diseased. The quantity of albumen may be very small in the first case, and very great in the last.

The general rule that the quantity of albumen is proportioned to the state of the congestion of the kidney, is of great importance for treatment and prognosis; and the exceptional cases mentioned above only confirm the general rule, that the quantity of albumen indicates the degree of congestion, and not the degree of degeneration. Such cases are also instructive, because they show the necessity for making more than one or two examinations for albumen before it is concluded that no disease of the kidneys exist.

In the first of the two last cases, I have mentioned the pale color of the urine at the time when acute inflammation of the pleura was present. This paleness of color may be very frequently observed when blood is not present to discolor the urine. When the kidneys are healthy, acute inflammation causes the urine to become deeply colored, almost proportionately to the intensity of the inflammation; but when the kidneys are diseased, this proportion ceases. In Bright's disease the most intense inflammation of a serous membrane may exist, and yet the urine throughout may show no alteration of color or appearance.

Among many examples of this, perhaps one of the most striking that I have seen was in a medical man, who for many months had pale, straw-colored urine, highly albuminous, specific gravity about 1010. He was attacked by acute pericarditis, with delirium and loss of sleep. His symptoms exactly resembled those which occasionally occur in the pericarditis of rheumatic fever. He died about the tenth day of the inflammation: the urine throughout presented no change whatever in color or specific gravity; it had no resemblance to the urine of acute inflammation.

Such, then, are some of the facts which may be derived from observation of the specific gravity, the coagulability, and the color of the urine, in cases of disease of the kidney. You will see from this, that chemistry cannot tell the exact state in which the kidney will be found after death, but it does give much help in determining the state of the circulation through the kidney during life.

That which chemistry is unable to effect, the microscope professes to

make clear. According to the microscopic appearances of the urine, the appearances observed in the kidney after death have been subdivided into many different diseases; and instead of a single disease in different states of congestion and stages of deposit, we are asked to recognize as many different diseases as there are different microscopic appearances in the urine. Thus, in urine may be found,—1st, tube-casts, with recent gland cells; 2dly, waxy tube-casts; 3dly, fatty tube-casts; 4thly, casts with fibrin; 5thly, casts with pus or blood. These are said to be the distinctive signs of nearly as many distinct diseases. First, of acute or chronic desquamative nephritis. The second disease is, waxy degeneration of the kidney. The third, fatty degeneration; and this is divided into two perfectly distinct diseases—granular fatty degeneration, and mottled fatty degeneration. The fourth disease, corresponding to the fourth microscopic appearance, is acute and chronic non-desquamative nephritis. The fifth disease is suppurative nephritis. This subdivision can scarcely fail to remind you of the proposed subdivisions of some cutaneous diseases, founded on the appearance of the eruption. There is no practical gain in subdividing scabies or erysipelas into different diseases, according to the appearances of the eruption. What, think you, was gained by assuming as many different syphilitic poisons as there were different forms of secondary syphilitic eruption? I shall keep to the simpler view, which appears to me to be truer, simpler, and more practical: a single disease, in different states and stages of congestion, deposit and wasting, not arising from the elimination of any particular animal poison, but produced by a diseased state of nutrition leading to the deposit of fibrin, fat, and pus, and ultimately to the wasting of the structure of the organ.

Such are the broadest outlines of the different views of Bright's disease. There are, at present, four cases of this disease under my care in the hospital. You will see how little assistance, in regard to their treatment, can be derived from the microscopic examination of the urine. Nevertheless, with the hope of arriving at more certain knowledge, the microscopic appearances of the urine should be carefully observed. You may thus help to determine, whether there is a vital process of desquamation,—a rapid formation and shedding of renal gland-cells; whether the so-called large, granular fat kidney and the small, contracted kidney are the result of two essentially different morbid processes; whether the epithelium in this last state is disintegrated and swept away, and in the former state transformed into fat; whether the smooth, mottled, fatty kidney, or whether the deposit of fat is not unessential in both states of kidney, appearing as pus, may appear in any stage or state of the disease.

Those of you who may have the opportunity of seeing much of scarlet fever will, by careful microscopic examination of the urine, be able to add

importantly to our knowledge. The late Dr. Miller, than whom I know no one who had so carefully watched the sequelæ of scarlet fever, and from whom, if his life had been spared, more valuable knowledge would have been obtained, told me that he had seen in the urine every variety of microscopic appearance attributed to Bright's disease; and that in post-mortem examinations no distinction could be made; for all forms of deposit were to be found after scarlet fever. The microscopical questions regarding the state of the urine after scarlet fever, will repay the minutest and most extended research. Whatever you observe, note it carefully, and publish it slowly; for premature publication leads only to corrections, and ends in disputes.

You will say, What is to guide me in my prognosis and treatment? I reply, Do not trust alone to the microscopic appearances in the urine, but take the case as a whole. In a case of consumption, it is rarely that you can determine by the stethoscope alone the course which the disease will follow, or the best treatment to be adopted. The stethoscope may give most important assistance; but the history, the general symptoms, the special circumstances, will still more correctly determine your judgment as to the duration of the case and the most suitable treatment. So, also, in renal diseases. The microscopic examination may give most valuable knowledge regarding the state of the kidney, *e. g.*, the pus may indicate suppurative inflammation; the blood, a loaded state of vessels; the fibrinous casts, the degree of recent congestion; the fatty matter, the duration, perhaps, of the evil; but it is far more important to take all the features of the case than to make the microscope the sole foundation for your prognosis and treatment.

In albuminuria, as in other diseases, take the history first. If you can trace the complaint to scarlet fever, to sudden cold, or to pregnancy, the chance of recovery is far more favorable than if the disease has insensibly approached. I could give you many instances of recovery, where the disease commenced from such causes; but I know of no perfect recoveries, where a bad state of health has given rise to disease of the kidney as a secondary consequence of a previous cachectic state.—*Med. Times and Gazette*.—*Braithwaite's Retrospect*.



#### PART IV.—HOSPITAL RECORDS.

(*Crowded out by press of matter.*)

**PART V.—EDITORIAL AND MISCELLANEOUS.**

[THE following letter was addressed to the Agent or Actuary of one of the principal Life Insurance Companies in this city, in reply to a request to answer the usual interrogatories submitted to the ordinary attendant of the person whose life is proposed for assurance:]

DEAR SIR :

I have not, for several years, answered the questions proposed by insurance companies "to the physician of the person" whose life is to be insured, without an appropriate fee *from such companies*.

It has been the constant and universal practice of Insurance Companies to obtain the opinions of medical men in this way, without offering any remuneration for such opinions; and,—without meaning any disrespect to the individual members,—I assure you, I have always considered it a disreputable practice with these companies, thus to *sponge* from a professional man an opinion based on acquirements which are as much a part of his capital in trade as the stock of those companies is theirs.

I am aware that it is usually asked on the ground, that it is for the benefit of the patient that the opinion is desired. This I deny. It is of no consequence to the patient, if he obtains his policy, what his physician's opinion is in regard to his case, so far as the assurance on his life is concerned; but it is of very great importance with the company assuring his life, that they have the true professional opinion of the medical man who is attendant, in ordinary, of the patient whose life they propose to assure—for the very evident reason that *he* knows more of the individual's health, and of the risk involved in that assurance, than any other man can know. It is for these reasons simply a matter of justice, that Insurance Companies should be required to pay for such opinions.

I therefore decline in this, as well as in all other similar cases, to give my opinion without the usual fee from the company; and every other medical man who entertains a just sense of the dignity and worth of his profession will decide, under the circumstances, to act in the same way.

Very respectfully, &c.,

— — — — —, M. D.

[This very question, alluded to in the above letter,—“Who ought to pay the surgeon's fee?”—has been agitated quite recently among the London medical profession. In an article on this subject, published in the November number of the *London Medical Times and Gazette*, the Editors hold the following language.]

The patient, the applicant to the office, cannot be benefitted by the opinion of his medical attendant; the office must, in every case, be benefitted. The association must, for its continued existence, gain new members; it is to the advantage of the association that those members be good lives. The medical opinion secures them good lives; and, therefore, we say the medical opinion "confers an obligation on the society rather than on the patient." Never was a more just demand for payment made than that of the medical practitioner for an opinion given under seal to an insurance office; and we earnestly trust that our professional brethren will, one and all, and on every occasion, decline to answer any questions forwarded to them by the repudiating offices, and also in every way exhibit their want of trust in offices the directors of which decline to pay that which in equity they are bound to pay. Confidence in the *public* moral principle of the managers of such offices should be withdrawn by every member of the profession.

The farce of making the man who applied to have his life assured sign the application, which is to be returned sealed to the secretary of the society, and then pretending that the former, and not the latter, requires the opinion,—an opinion which may cause him to be rejected,—is too trumpery to be played with any effect; and we should strongly advise the managers of the London Life Association to have it withdrawn *instanter*, if they desire their office to hold even a moderately respectable position. The directors of the Association must know, the secretary must know, the candidate for assurance, and the profession know, that it is—we can use but one word to express it—pure humbug.

H. G.

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SOLIDIFIED MILK.—A few days since we had the honor of an invitation to accompany a committee of medical gentlemen appointed by the New York Academy of Medicine, to visit the establishment where the above-mentioned article is prepared. After an agreeable railroad trip of 80 miles or thereabouts, in the Harlem cars, with Dr. Griscom, Chairman of the Committee, Drs. Isaac Wood, Blakeman, Shanks, White, and Dr. C. T. Harris, Chemist, who for several years has been associated with Mr. Blatchford in perfecting the preparation, we reached Amenia, some 20 or 30 miles east of Poughkeepsie, Dutchess Co. Here we were joined by the venerable Dr. Blatchford of Troy, whose son is proprietor of the establishment. Conveyances were in readiness to carry us a few miles nearer the Hudson, over rolling hills which afforded a fine opportunity for judging of the pasture ground, as well as ventilating our lungs of city air. No member of the Committee ventured suggestions of slop milk.

While some of the party spent the night with the proprietor, others of us enjoyed the politely offered hospitality of Dr. Smith, who regaled us with a scientific treat in the shape of the most beautiful and neatly classified private collection of minerals we have ever chanced to see.

By day-break the Chairman of the Committee was aroused (the penalty of office) to be present at the milking, that he might testify as to the purity of the source of the milk, and the appearance of the cattle.

After our morning repast, we were invited to witness the process of *solidification*.

To 112 lbs. of milk, 28 lbs. of Stuart's white sugar were added, and a trivial proportion of bi-carbonate of soda, a teaspoonful, merely enough to ensure the neutralizing of any acidity, which in the summer season is exhibited even a few minutes after milking, although inappreciable to the organs of taste. The sweet milk was poured into evaporating pans of enameled iron, embedded in warm water heated by steam. A thermometer was immersed in each of these water baths; that, by frequent inspection, the temperature might not rise above the point which years of experience have shown advisable.

To facilitate the evaporation,—by means of blowers and other ingenious apparatus,—a current of air is established between the covers of the pans and the solidifying milk. Connected with the steam engine is an arrangement of stirrers, for agitating the milk slightly whilst evaporating, and so gently as not to *churn* it. In about three hours the milk and sugar assumed a pasty consistency, and delighted the palates of all present; by constant manipulation and warming it was reduced to a rich, creamy-looking powder, then exposed to the air to cool, weighed into parcels of a pound each, and by a press, with the force of a ton or two, made to assume the compact form of a tablet (the size of a small brick), in which shape, covered with tin foil, it is presented to the public.

Incidentally we had an opportunity of judging of the cleanliness of the establishment; for while in some of the pans the process of evaporation was being completed, others were being washed for a second charge. (One of the Committee hinted, that the refuse washings were no bad approach to much of our city milk.) Great precaution was used lest any of the first evaporation should be subjected to a second heating, as the last batch might thereby be spoiled.

During the day the Committee made an excursion through the thousand acres of pasture land, connected with the establishment, and visited some of the commanding points of view from whence might be seen in a glance, the hills of Connecticut, Massachusetts, and the cloud-crested Kaatskill ls of New York. This panorama of distant hill tops, of green grass, and blue sky, will not fade from remembrance. To vary the entertainment, at-

tempts were made to secure a few frogs, for exhibiting the *circulation of the blood*, making *frog batteries*, etc., but with limited success—the weather being cool, only two were netted and bagged. The old mountains echoed and re-echoed many a hearty peal of laughter at the anecdotes of medical experience, which might prove a valuable addition to the "Diary of a Physician."

After a sumptuous dinner, we had the honor of being requested to read to the Committee a monograph on the chemical constitution of milk, with an exact account of each of the important ingredients involved in the process of solidifying and preserving this article, written by Mr. Dalson, the chemist to whose talent we are indebted for this invaluable preparation.

After a vote of thanks on the part of the guests to their host and hostess, and an expression of gratification on the part of the proprietor to the Committee for their interest and apparent satisfaction, we resolved ourselves into a committee of cooks, dairymaids, experimenters, tasters, etc.

Some of the solidified milk which had been grated and dissolved in water the evening previous, was found covered with a rich cream, this, skimmed off, was soon converted into excellent butter. Another solution was speedily converted into wine whey, by a treatment precisely similar to that employed in using ordinary milk. It fully equalled the expectations of all; so that solidified milk will hereafter rank among the necessary appendages of the sick room. In fine, this article makes paps, custards, puddings, and cakes equal to the best milk; and one may be sure it is an unadulterated article, obtained from well-pastured cattle, and not the produce of distillery slops—neither can it be *watered*.

For our steam-ships, our packets, for those travelling by land or by sea, for hotel purposes or use in private families, for young or old, we recommend it cordially as a substitute for fresh milk.

We look with interest for the scientific report of the committee of the Academy of Medicine, in which we hope for an exposition of the domestic, culinary, and hygienic properties of solidified milk. †

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PENITENTIARY HOSPITAL.—There are, in the Penitentiary Hospital, Blackwell's Island, 479 patients; 370 of whom are females, and 109 males. Two hundred of the above are cases of syphilis in its different forms; 100 uterine diseases; the balance, delirium-tremens, debauch phthisis, scrofula, ulcers, fever, injuries, &c., &c.

Cholera has entirely disappeared from the Hospital, Alms-Houses, and Work-House. There occurred at the above institutions, between the 28th of July and the 22d of August, over 300 cases of cholera. The *calomel and opium* treatment was chiefly relied on, and was successful.

The Penitentiary Hospital is in fine order, and contains 189 more patients than it did last year at this date. During the coming month a complete system of ventilation will be introduced, under the supervision of Dr. Sanger, the able and accomplished resident physician; \$500 having been appropriated by the Ten Governors for that purpose.

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**EMIGRANTS' REFUGE, WARD'S ISLAND; WEEKLY REPORT FROM SEPT. 10 TO  
SEPT. 16, 1854.**

	Female.	Male.	Total.
Remaining in the Institution at the last report, . . . . .	1,083	1,107	2,190
Admitted since, . . . . .	101	170	271
Total, . . . . .	1,192	1,280	2,472
Discharged since last report, . . . . .	92	162	254
Died, . . . . .	11	16	27
Total, . . . . .	103	178	281
Remaining in institution, . . . . .	1,089	1,102	2,191
Children under 32 years of age, 696.			

*Summary Statements for the week ending Sept. 20, 1854.*—Alien immigrants arrived up to 13th, 217,662; since arrived up to 20th, 9,474; total, 227,136. Total to Sept. 20th of last year, 202,243. Patients in Marine Hospital, 177; Nurses in do., 68; Adults in Ward's Island do., 934; Children in do., 277; Persons employed, 96. Total in Ward's Island, 1,307. Adults in Refuge Department, 561; Children in do., 420; Persons employed, 120. Total in Refuge Department, 1,100.

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**MEDICAL SCHOOLS—SESSION OF 1854–5.**—The season approaches for the opening of the winter session of our Medical Colleges. To these institutions, now numbering upwards of forty, each having its full complement of teachers, is intrusted the great interests of the profession in this country. They are to give the stamp to the future character which it will maintain, whether high-toned, practical, and scientific, or mercenary, empirical, and superficial. Their responsibilities, therefore, are of no ordinary kind, and their claims to patronage should be thoroughly canvassed by every physician who has pupils in charge, to whom he acts as an adviser. Let him consider well the real advantages of the different schools for giving such instruction as he knows from experience they must need, with the qualifications of the various teachers to employ such advantages for the pupils' greatest good.

We have frequently spoken of the advantages of New York for medical teaching, and deem it our duty to recur to them again in the annual announcement of the opening of our Medical Colleges.

The most important advantage which mere location can give one medical school over another, is in respect to clinical teaching. The time is fast approaching when clinical teaching will be deemed an indispensable part of a thorough course of didactic instruction. A growing disposition manifests itself yearly among all ranks of students to obtain access to the wards of hospitals, and learn from actual experience, and apply at the bed-side the lessons which they have but indifferently learned in the lecture room. And it is gratifying to witness this increasing estimation of clinical studies; for it is the only true method of graduating a clear-minded, practical class of physicians, who can safely go from the college halls into the active and responsible duties of their profession.

In this single respect, location gives to the Schools of New York, an advantage well worthy of consideration. The materials for clinical instructions at their command, exist in the greatest abundance. The immense native and immigrant population that seeks medical advice and assistance at her public charities, is without parallel. The following statistics gathered from the annual reports of the several Dispensaries, exhibits the number of patients treated at these Institutions during the year 1853: City Dispensary, 46,338; Eastern, 23,114; Northern, 14,075; Demilt, 9,006; North-Western, 4,948; total, 97,481. If we add to this number the patients treated at the different Hospitals, Asylums, &c., the aggregate will not fall below 150,000.—*N. Y. Jour. of Med.*

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**DEATH OF PROF. SWETT.**—Died, in this city, on Monday, Sept. 18th, John A. Swett, M. D., aged 45 years, of "Bright's disease." He was Professor of Theory and Practice of Medicine in the University Medical College, and Physician to the New York Hospital. He was particularly eminent in diseases of the chest; and his work on this subject is well known to the profession.

At a meeting of the Physicians and Surgeons of the New York Hospital, held at the Institution on the 19th of September, 1854, on the occasion of his death, of which Dr. THOMAS COCK was chosen Chairman, and Dr. BULKLEY, Secretary, the following resolutions were unanimously passed:

*Resolved*, That the Physicians and Surgeons of this Hospital have heard, with deep regret, of the death of their colleague, JOHN A. SWETT, M. D., one of the Physicians of the Institution.

*Resolved*, That we recognize in this dispensation of Providence the removal of one whose life has exhibited exemplary devotedness to his profession, and whose labors and contributions to medical science, and especially to that department with which his reputation is more intimately connected, have done much to elevate its character and usefulness.

*Resolved*, That in his death we are called to mourn the loss of one endeared to us by many social qualities, whose honorable deportment and integrity of character have ever commanded universal respect and esteem.

*Resolved*, That Dr. JOHN WATSON be requested to prepare a memoir and address on the life and services of our deceased colleague, to be delivered at this Hospital at some future time.

*Resolved*, That a copy of these resolutions be transmitted to the family of the deceased.

THOMAS COCK, M. D., *Chairman.*

H. D. BULKLEY, M. D., *Secretary.*

It is with heartfelt regret we take our pen to record the decease of the illustrious chemist, Dr. Charles Enderlin, by whose indefatigable labors in the laboratory the pages of physiological chemistry have been so greatly enriched. His loss will be deeply deplored by the scientific men of both hemispheres; as he ranked among the pioneers.

Through the kindness of an intimate friend, we learn that he was born at Steinbach (Baden), Germany, April 16th, 1813; that he pursued the study of pharmacy under Geiger at Heidelberg, that of medicine in the same city and in Würzburg, and completed his chemical course under Liebig at Giessen.

His contributions to physiological chemistry appeared as a series of communications in Liebig's *Annalen*:

In 1843, "On the Acids of the Gastric Juice;" in 1844, "Physiogeo-Chemical Investigations on the Constitution of Human Blood and the Blood of different Herbivorous Mammalia;" in the same year, "On the Constitution of *Bile* and of *Saliva*;" in 1847, "On the Constitution of the Blood of Birds and Fishes;" also, two analyses of the blood of frogs.

All of the above investigations referred especially to the mineral constituents of the liquids, and was sustained by long series of analyses of their ashes.

In 1848 appeared a continuation of his investigations of the blood of birds, fishes, etc.; in 1850, "Special Researches on the Quantity of Potash in the Blood, and the relative proportions of potash and soda;" in the same year, "On a Specific Metamorphosis of the *Bile* of the *Ox*, as a contribution to the knowledge of the chemical constitution of bile in general;" and again, "A Communication on *Human Bile* and *Biline*;" also one "On the presence of *bile* in the *blood*."

Although the greater part of his investigations were devoted to the highest department of his favorite science, chemistry as applied to physiology; yet, after his arrival in the United States, Oct. 8th, 1850, and his successful establishment of a laboratory in this city, agricultural chemistry and mining operations attracted his attention. In fact, it was on his return from a mining excursion in Canada, while at the railroad depot in Hamilton, C. W., that he was struck senseless, and died a week after, on the morning of Sept. 16th; the immediate cause of his decease being pronounced by the attending physicians as compression of the brain. His remains were interred in Hamilton.

His gentlemanly bearing, manly character, and warm heart, as well as his profound erudition, endeared him to all who enjoyed his acquaintance or called him friend. For those who claimed him by the more endearing ties of husband and father, we offer our sincere expressions of sympathy.

We trust the numerous and valuable unpublished papers of Dr. Enderlin may not be lost to the scientific world.

R. O. D.